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# Ranked Input and Output Data Used to Determine Impact of New Source Performance Standards for Particulate Matter, Nitrogen Oxides, and Sulfur Oxides

Research Corp. of New England, Wethersfield, Conn.

Prepared for

Environmental Protection Agency, Research Triangle Park, N.C.

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# RANKED INPUT AND OUTPUT DATA USED TO DETERMINE IMPACT OF NEW SOURCE PERFORMANCE STANDARDS FOR PARTICULATE MATTER, NITROGEN OXIDES, AND SULFUR OXIDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

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16. ABSTRACT
The purpose of this document is to present the results of a study to determine the impact of new source performance standards on nationwide emissions. The work presented covers 14 potential pollutants from approximately 200 source categories for the year 1985. The results are being used by EPA as input to the development of an overall standard setting strategy. The report contains information regarding controlled and uncontrolled emission factors, State emission limitations, industrial capacity, utilization, growth and retirement rates. The results of this study have been published as three volumes which encompass ten separate documents. This document contains Appendices D through G of Volume III.

17. KEY WORDS AND DOCUMENT ANALYSIS

| a. DESCRIPTORS | b. IDENTIFIERS/OPEN ENDED TERMS | | c. COSATI Field/Group |
|---|---|---|---|
| Air Pollution<br>Air Pollution Control<br>Industrial Processes<br>Combustion<br>Regulations<br>Economic Factors | Priorities<br>Chemical Industry<br>Paper Industry<br>Petroleum Industry | Metal Industry<br>Agricultural<br>Mineral<br>Flyash<br>Exhaust Gases | |

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# RANKED INPUT AND OUTPUT DATA USED TO DETERMINE IMPACT OF NEW SOURCE PERFORMANCE STANDARDS FOR PARTICULATE MATTER, NITROGEN OXIDES, AND SULFUR OXIDES

by

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Contract No. 68-02-1382

EPA Project Officer: Gary D. McCutchen

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

April 1977

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Publication No. EPA-450/3-76-019-b

## FOREWORD

During 1974, two studies were initiated that ultimately resulted in the establishment of priorities for developing and promulgating New Source Performance Standards (NSPS). The procedures used to determine these priorities produced a great deal of information that is believed to be useful in the industries involved and, accordingly, is being published in this series of reports (EPA-450/3-76-017, EPA-450/3-76-018, EPA-450/3-76-019, and EPA-450/3-76-020). This information is organized as follows:

EPA-450/3-76-017 discusses (1) the mathematical model (Model IV) used to determine NSPS impacts over a 10-year period; (2) the methods used to attain input variables; and (3) the summary tables which are the heart of this study. Included in the summary tables are data related to (1) emission, growth, and replacement rates; (2) present and future production and capacity; (3) nationwide emissions; and (4) NSPS impact. These tables include information on 13 pollutants and nearly 200 stationary source categories.

EPA-450/3-3-76-018-a, -b, -c, -d, -e, and -f are the calculation sheets, showing how the input variables reported in EPA-450/3-76-017 were derived. All information sources, assumptions, and calculations are documented and explained. The appropriate worksheets are arranged alphabetically in the following volumes:

018-a - Stationary Combustion Sources

018-b - Chemical Processing Industries

018-c - Food and Agricultural Industries

018-d - Mineral Products Industries

018-e - Metallurgical Industries

018-f - Miscellaneous Sources (Evaporation Losses, Petroleum Industry, Wood Products Industry, and Assembly Plants

The 018-a -f series is of interest only to those concerned with the detailed calculations used to determine the Model IV input variables.

EPA-450/3-76-019-a provides additional results and information produced during the priority study. Its major purpose is to describe the computer program used to rank all the Model IV input and output variables by pollutant (these rankings are reported in 019-b and -c). In addition, it contains (1) summaries of the control systems considered "best" for each source, (2) equipment retirement ages, and (3) emission trends for each source category.

EPA-450/3-76-019-b and c present the computer-generated ranked data for each pollutant. Ranking is from highest to lowest for each of the 21 variables, e.g., A (nationwide capacity) and $E_u$ (uncontrolled emission rate). Volume 019-b contains ranked data for particulate, nitrogen oxide ($NO_x$), and sulfur oxide ($SO_x$) sources. In Volume 019-c, the remaining pollutant sources are ranked: hydrocarbons, carbon monoxide (CO), fluorides, hazardous material, acid mist, lead, ammonia, sulfides, chlorine, and trace metals.

EPA-450/3-76-020, the final document in this series, takes the objective impact values from EPA-450/3-76-017, adds subjective judgements, and uses these combined criteria to produce a priority list for NSPS development. The report then calculates nationwide emission trends over the next 15 years for each criteria pollutant (particulate, $SO_x$, $NO_x$, hydrocarbons, and CO) based on a series of scenarios (e.g., no NSPS, 20 NSPS per year, etc.)

In summary, documents EPA-450/3-76-017 and 020 present the results of this study. Each stands alone, but they also complement each other, with 020 building on the results of 017. The remaining documents (018-a -f and 019-a -c) present additional and/or more detailed information derived from the impact and priority studies.

RANKED DATA FOR PARTICULATES

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE S | EMISSION RATES UNCONT E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| BRCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.5 | 21.9 | 18.0 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW. | 0.90 | | 1.000 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST. | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW. | 0.56 | | 1.460 | | | | | | | | |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.5 | 0.74 | 1.4 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| WOOD PULPING SULFITE | 0.93 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 2.250 | | | | | | | | |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MFG.-WOOL PRODUCTS | | | | | | | | | | | |
| | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SYNTHETIC RESINS - POLYESTER | | | | | | | | | | | |
| | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| FRIT MANUFACTURING | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| CHARCOAL | | | | | | | | | | | |
| | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| CLAY SINTERING | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| SECONDARY COPPER - HANDLING | | | | | | | | | | | |
| | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| PERLITE | | | | | | | | | | | |
| | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| MINING/MILLING LEAD ORE | | | | | | | | | | | |
| | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| SOAP | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | | | | | | | | | | | |
| | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| GLASS - OPAL | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| HYDROFLUORIC ACID | | | | | | | | | | | |
| | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| CASTABLE REFRACTORY | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| SECONDARY ZINC - DISTILLATION | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| FISH MEAL PROCESSING | | | | | | | | | | | |
| | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC ALUMINUM - SWEAT FURNACE | | | | | | | | | | | |
| | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| AUTOBODY INCINERATION | | | | | | | | | | | |
| | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| IRON AND STEEL - BLAST FURNACE | 10335. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N /E S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| PLYWOOD - VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| SAND AND GRAVEL PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| CONCRETE BATCHING | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| LEAD ACID BATTERY | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ENS | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE $E_S$ | $E_N$ | UNCONT $E_U$ | GROWTH RATES DECIMAL/YR $P_B$ | $P_C$ | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| PRIMARY ZINC SMELTERS EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| SLUDGE INCINERATION EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST. | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW. | 0.85 | | 3.060 | | | | | | | | |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST. | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW. | 0.80 | | 1.200 | | | | | | | | |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PLYWOOD - VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| CONCRETE BATCHING | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| INDUSTRIAL/COMMERCIAL INCINERATION | | | | | | | | | | | |
| | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| LEAD ACID BATTERY | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW. | 0.90 | | 1.000 | | | | | | | | |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST. | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW. | 0.56 | | 1.460 | | | | | | | | |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 2.250 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.73 | 0.36 | 0.42 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.400 | | | | | | | | |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW* | 0.85 | | 3.060 | | | | | | | | |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST* | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW* | 0.80 | | 1.200 | | | | | | | | |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |

$\underline{E_N}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| FET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.800 | | | | | | | | |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.360 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE FES | EMISSION RATES ALLOWABLE FEN | EMISSION RATES UNCONTEU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| SEC MAGNESIUM | [illegible]2 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| VEGETABLE [illegible]UCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW. | 0.90 | | 0.150 | | | | | | | | |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.334 | | | | | | | | |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.340 | | | | | | | | |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.100 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.169 | | | | | | | | |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST. | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW. | 0.85 | | 0.017 | | | | | | | | |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |

PARTIC LATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.300 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.53 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.690 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 32.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |

$E_S$ (Existing)

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW. | 0.90 | | 0.640 | | | | | | | | |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| PHOSPHOPIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE $E_S$ | $E_N$ | UNCONT $E_U$ | GROWTH RATES DECIMAL/YR $P_d$ | $P_C$ | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW. | 0.90 | | 0.150 | | | | | | | | |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST. | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW. | 0.85 | | 0.017 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| DEEP FAT FRYING | 13.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 91.1 | 2.9 | 1.5 | 1300. | 0.872 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |

$E_S$ (New)

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST* | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW* | 0.85 | | 0.017 | | | | | | | | |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| SECONDARY LEAD - BLAST | 13.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| PETROLEUM REFNRY FCCU | 23[illegible]. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |

$\underline{E_U}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.100 | | | | | | | | |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.334 | | | | | | | | |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1504. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SEC MAGNESIUM | 0.055 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N |
|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | . 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.0 | 0.59 | 990. | 0.996 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| • BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| • ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |

$\underline{1 - E_N/E_S}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST. | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW. | 0.80 | | 1.200 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.169 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.340 | | | | | | | | |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.334 | | | | | | | | |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST. | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW. | 0.85 | | 3.060 | | | | | | | | |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.375 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.966 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW. | 0.90 | | 1.000 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW. | 0.90 | | 0.150 | | | | | | | | |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 196.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST. | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW. | 0.50 | | 1.600 | | | | | | | | |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| • GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| • GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| • ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| • BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC MAGNESIUM | 0.036 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.30 | 290. | 0.499 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |

$\underline{P_B}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.340 | | | | | | | | |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.334 | | | | | | | | |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW* | 0.56 | | 1.460 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| AUTOBODY INCINERATION | | | | | | | | | | | |
| | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| INDUSTRIAL/COMMERCIAL INCINERATION | | | | | | | | | | | |
| | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - DRYING | | | | | | | | | | | |
| | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| SEC ALUMINUM - REVERB FURNACE | | | | | | | | | | | |
| | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SEC ALUMINUM - SWEAT FURNACE | | | | | | | | | | | |
| | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| PRIMARY COPPER | | | | | | | | | | | |
| | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| SECONDARY COPPER - SMELTING | | | | | | | | | | | |
| | 0.82 | LB/TON | 3.470 | 0.338 | 84.000 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SEC MAGNESIUM | | | | | | | | | | | |
| | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY ZINC - DISTILLATION | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SECONDARY COPPER - HANDLING | | | | | | | | | | | |
| | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST* | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW* | 0.85 | | 0.017 | | | | | | | | |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.169 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| PLYWOOD VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PHOSPHATE ROCK - CALCINING | 67.5 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.930 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| DEEP FAT FRYING | 13.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |

## $P_C$ (Compound)

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.100 | | | | | | | | |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.800 | | | | | | | | |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW* | 0.32 | | 0.334 | | | | | | | | |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW* | 0.85 | | 3.060 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T - T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| POLYVINYL CHLORIDE | 83.5 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |

## $P_C$ (Simple)

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST. | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW. | 0.50 | | 1.600 | | | | | | | | |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW. | 0.90 | | 1.000 | | | | | | | | |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.169 | | | | | | | | |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.046S | E6 TONS | 2.5 | 1.3 | 1.2 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST. | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW. | 0.90 | | 0.150 | | | | | | | | |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST. | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW. | 0.56 | | 1.460 | | | | | | | | |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| COAL CLEANING - THERMAL DRYING EXIST* | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW* | 0.59 | | 0.340 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 3.0 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST. | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW. | 0.85 | | 3.060 | | | | | | | | |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST. | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW. | 0.80 | | 1.200 | | | | | | | | |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 134. | 124. | 189. | 130. | 59600. | 0.912 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |

K

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| FULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| FLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| FERROALLOY - SUBMERGED ARC FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| ASPHALT SATURATOR | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| IRON AND STEEL - SCARFING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| ASPHALT BLOWING | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| FERTILIZER - DAP | | | | | | | | | | | |
| | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| PHOSPHATE ROCK - DRYING/HANDLING | | | | | | | | | | | |
| | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| SODIUM CARBONATE - NATURAL | | | | | | | | | | | |
| | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| FLY ASH SINTERING | | | | | | | | | | | |
| | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PET REF - PROC GAS COMB | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PRIMARY COPPER | | | | | | | | | | | |
| | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 2.250 | | | | | | | | |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400. | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BRASS & BRONZE SMELTING EXIST. | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW. | 0.80 | | 1.200 | | | | | | | | |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 2.5 | 1.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| DIRECT FIRING OF HEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.340 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.100 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST. | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW. | 0.56 | | 1.460 | | | | | | | | |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| • ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| DIRECT FIRING OF HEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |

$\underline{T_U}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| PLYWOOD - VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| CERAMIC CLAY | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ENS | EMISSION RATES UNCONTEU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST. | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW. | 0.80 | | 1.200 | | | | | | | | |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| FISH MEAL PROCESSING | 0.81 | LB. TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| WOOD PULPING KRAFT | 3700. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| BOILERS .3-10 MM BTU/HR | 1260. | 627. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CHARCOAL | 181• | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200• | 0.821 |
| FERTILIZER - DAP | 176• | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600• | 0.535 |
| SEC ALUMINUM - REVERB FURNACE | 167• | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800• | 0.800 |
| IRON AND STEEL - SCARFING | 152• | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400• | 0.783 |
| FEED MILLING - OTHER | 151• | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300• | 0.951 |
| DETERGENT | 143• | 1.7 | 1.7 | 101• | 2.4 | 1.9 | 480• | 0.700 |
| GRAIN HANDLING - DRYING | 137• | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300• | 0.922 |
| MINERAL WOOL | 135• | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000• | 0.150 |
| SLUDGE INCINERATION | 122• | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114• | 40.1 | 24.4 | 24.4 | 114• | 25.3 | 88400• | 0.990 |
| FERTILIZER - NITRATES | 101• | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900• | 0.845 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290• | 0.129 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800• | 0.903 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300• | 0.872 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720• | 0.941 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500• | 0.890 |
| • GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500• | 1.000 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700• | 0.770 |
| FEED MILLING - ALFALFA DEHYDR• | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200• | 0.879 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| • ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

$T_A$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.026S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| SAND AND GRAVEL PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| PLYWOOD - VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| INDUSTRIAL/COMMERCIAL INCINERATION | | | | | | | | | | | |
| | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PRIMARY COPPER | | | | | | | | | | | |
| | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| STEEL FOUNDRIES | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GLASS - SODALIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| VEGETABLE OIL PRODUCTION | | | | | | | | | | | |
| | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| DIRECT FIRING OF MEATS | | | | | | | | | | | |
| | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| WHISKEY | | | | | | | | | | | |
| | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| CAST IRON FOUNDRY - ELEC. FURN. | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| FERROALLOY - SUBMERGED ARC FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| CONCRETE BATCHING | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| CERAMIC CLAY | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| GRAIN HANDLING - DRYING | | | | | | | | | | | |
| | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 5.2 | 8.8 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST* | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW* | 0.90 | | 0.150 | | | | | | | | |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST. | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW. | 0.83 | | 2.250 | | | | | | | | |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST. | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW. | 0.68 | | 1.250 | | | | | | | | |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST. | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW. | 0.50 | | 1.600 | | | | | | | | |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| FLY ASH SINTERING | 0.86 | LB. TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.530 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

# PARTICULATES

## SUMMARY OF INPUT/OUTPUT VARIABLES FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ENE | EMISSION RATES UNCONTEU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.800 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| COKE OVENS - BY PRODUCT | 183. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1124. | 65.2 | 22.7 | 42400. | 0.940 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| IRON & STEEL -.BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| FEED MILLING - ALFALFA DEHYDR. | 71.0 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| CLAY SINTERING | 9.[illegible] | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| BRASS & BRONZE SMELTING | 10.[illegible] | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |

PARTIC TES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

$T_E$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| COAL CLEANING - THERMAL DRYING | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| EXIST= | 0.59 | | 0.340 | | | | | | | | |
| NEW= | | | | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST* | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW* | 0.90 | | 0.150 | | | | | | | | |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PRIMARY LEAD SMELTERS EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| CASTABLE REFRACTORY | 0.50 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.380 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BRASS & BRONZE SMELTING EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| GLASS - BPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MFG--TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | |
| BLR >250 E6 BTU/HR | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| BLR 10-250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| GRAIN HANDLING - PROCESSING | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| COKE OVENS - BY PRODUCT | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| ASPHALT BATCHING | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| GRAIN HANDLING - TRANSFER | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| * BOILERS <.3 MM BTU/HR | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| GRAIN HANDLING - SCREENING | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| STONE QUARRYING AND PROCESSING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| WOOD WASTE BOILERS | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| WOOD PULPING KRAFT | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| IRON AND STEEL - BLAST FURNACE | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON & STEEL - EAF | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| PETROLEUM REFNRY FCCU | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| BRICK & RELATED CLAY PRODUCTS | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| MUNICIPAL INCINERATION | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PRIMARY COPPER | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

$\underline{T_{UE}}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE $E_S$ | $E_N$ | UNCONT $E_U$ | GROWTH RATES DECIMAL/YR $P_B$ | $P_C$ | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| PRIMARY COPPER | | | | | | | | | | | |
| | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| FLY ASH SINTERING | | | | | | | | | | | |
| | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| FERROALLOY - SUBMERGED ARC FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW= | 0.85 | | 3.060 | | | | | | | | |
| VEGETABLE OIL PRODUCTION | | | | | | | | | | | |
| | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| PHOSPHATE ROCK - DRYING/HANDLING | | | | | | | | | | | |
| | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| SODIUM CARBONATE - NATURAL | | | | | | | | | | | |
| | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| DETERGENT | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| STEEL FOUNDRIES | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| CARBON BLACK - FURNACE PROCESS | | | | | | | | | | | |
| | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |
| PHOSPHATE ROCK - CALCINING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| SAND AND GRAVEL PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.410 | 4.710 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| GLASS - SODALIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| WHISKEY | | | | | | | | | | | |
| | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| FIBERGLASS MFG.-WOOL PRODUCTS | | | | | | | | | | | |
| | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| DIRECT FIRING OF MEATS | | | | | | | | | | | |
| | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| CAST IRON FOUNDRY - ELEC. FURN. | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| PHOSPHATE ROCK - GRINDING | | | | | | | | | | | |
| | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| ASPHALT SATURATOR | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| CONCRETE BATCHING | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| BEER PROCESSING | | | | | | | | | | | |
| | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| DEEP FAT FRYING | | | | | | | | | | | |
| | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| STARCH | | | | | | | | | | | |
| | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | | | | | | | | | | | |
| | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| CLAY SINTERING | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| SYNTHETIC FIBER - NYLON | | | | | | | | | | | |
| | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| SECONDARY ZINC - DISTILLATION | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| FRIT MANUFACTURING | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PERLITE | | | | | | | | | | | |
| | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| ASPHALT BLOWING | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| SYNTHETIC FIBER - DACRON | | | | | | | | | | | |
| | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| COFFEE ROASTING | | | | | | | | | | | |
| | 0.85 | LP/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| LEAD ACID BATTERY | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SEC ALUMINUM - SWEAT FURNACE | | | | | | | | | | | |
| | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| POLYPROPYLENE | | | | | | | | | | | |
| | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SOAP | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| SYNTHETIC RESINS - POLYESTER | | | | | | | | | | | |
| | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| PET REF - PROC GAS COMB | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY ZINC - SWEATING | | | | | | | | | | | |
| | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| PULPBOARD | | | | | | | | | | | |
| | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| PAINT MANUFACTURING | | | | | | | | | | | |
| | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| PATHOLOGICAL INCINERATION EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| PRIMARY COPPER | 557. | 38.8 | 24.3 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| • BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| CLAY SINTERING | 3.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

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PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| INDUSTRIAL/COMMERCIAL INCINERATION | | | | | | | | | | | |
| | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| PLYWOOD - VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST. | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW. | 0.85 | | 0.017 | | | | | | | | |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST. | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW. | 0.56 | | 1.460 | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.520 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.340 | | | | | | | | |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FEED MILLING - ALFALFA DEHYD. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| FET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST* | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW* | 0.50 | | 1.600 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 2.250 | | | | | | | | |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE FS | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW* | 0.85 | | 3.060 | | | | | | | | |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST= | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW= | 0.80 | | 1.200 | | | | | | | | |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.63 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW= | 0.34 | | 3.800 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| • BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| • GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T VE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| CERAMIC CLAY | 1384. | 17.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.871 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1[illegible]00. | 0.999 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.0 | 1.6 | 0.96 | 600. | 0.807 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| • ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

$\underline{T_S - T_N}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| GRAIN HANDLING - PROCESSING | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| STONE QUARRYING AND PROCESSING | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| GRAIN HANDLING - TRANSFER | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| WOOD WASTE BOILERS | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| GRAIN HANDLING - SCREENING | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| PLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ENS | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST* | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW* | 0.90 | | 0.640 | | | | | | | | |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST* | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW* | 0.85 | | 0.017 | | | | | | | | |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW* | 0.56 | | 1.460 | | | | | | | | |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| MINING/MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.99 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.28 | 0.0 |
| NEW* | 0.85 | | 3.060 | | | | | | | | |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 3.860 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 2.250 | | | | | | | | |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SMOKED MEAT | 0.21 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.300 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST* | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW* | 0.80 | | 1.200 | | | | | | | | |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.800 | | | | | | | | |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SECONDARY LEAD - POT FURNACE | | | | | | | | | | | |
| | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| FISH MEAL PROCESSING | | | | | | | | | | | |
| | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| FIBERGLASS MFG.-WOOL PRODUCTS | | | | | | | | | | | |
| | 0.70 | LB/TON | 8.640 | 8.[illegible]40 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| HYDROFLUORIC ACID | | | | | | | | | | | |
| | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.026S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.3[illegible] |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1935 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| * BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| * GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 93.7 | 50.2 | 22.3 | 27900. | 0.953 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.3 | 12.0 | 4.7 | 7200. | 0.871 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.78 | 1.3 | 6.8 | 1.3 | 5500. | 0.915 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| CEMENT PLANTS | 12749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.800 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.8 | 4.2 | 2.0 | 2200. | 0.990 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.906 |
| FRIT MANUFACTUPING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.854 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| CLAY SINTERING | 9.8 | 0.71 | 0.48 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.986 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |

$\underline{T_N}$

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 206.000 | 0.450 | 301.000 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 0.640 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.277 | 0.050 | 3.110 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.100 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.383 | 0.127 | 2.020 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.334 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.250 | 0.048 | 0.250 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| STONE QUARRYING AND PROCESSING | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.379 | 0.155 | 15.500 | 0.050S | 0.033S | E6 TONS | 1225. | 613. | 404. |
| GRAIN HANDLING - PROCESSING | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.160 | 0.030 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| GRAIN HANDLING - TRANSFER | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.940 | 0.200 | 20.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 4.900 | 0.430 | 4.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.376 | 0.045 | 15.000 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.169 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.039 | 0.000 | 0.039 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 5.630 | 5.630 | 198.000 | 0.031S | 0.012C | E6 TONS | 33.9 | 10.5 | 4.3 |
| IRON AND STEEL - BLAST FURNACE | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.500 | 1.500 | 150.000 | 0.028S | 0.029S | E6 TONS | 119. | 33.2 | 34.4 |
| GRAIN HANDLING - SCREENING | | | | | | | | | | | |
| | 0.82 | LB/TON | 1.610 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 240. | 88.7 | 38.5 |
| WOOD WASTE BOILERS | | | | | | | | | | | |
| | 0.58 | LB/TON | 3.010 | 0.280 | 27.500 | 0.050S | 0.012C | E6 TONS | 163. | 81.4 | 20.6 |
| IRON & STEEL - EAF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 4.490 | 0.480 | 28.300 | 0.028S | 0.073S | E6 TONS | 36.7 | 10.3 | 26.8 |
| NEW= | 0.90 | | 1.000 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.770 | 1.320 | 130.500 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETROLEUM REFNRY FCCU | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 0.066 | 0.010 | 0.242 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 766. |
| NEW= | 0.85 | | 0.017 | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 5.410 | 4.610 | 5.410 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MUNICIPAL INCINERATION | | | | | | | | | | | |
| EXIST= | 0.56 | LB/TON | 4.600 | 0.990 | 19.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NEW= | 0.56 | | 1.460 | | | | | | | | |
| FLYWOOD - VENEER | 0.95 | LB/TON | 0.004 | 0.001 | 0.132 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 5.000 | 3.660 | 366.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY COPPER | 0.85 | LB/TON | 37.900 | 1.220 | 405.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.87 | 0.83 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 0.38 | LB/TON | 6.470 | 0.065 | 6.470 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| SAND AND GRAVEL PROCESSING | 0.80 | LB/TON | 0.100 | 0.005 | 0.100 | 0.050S | 0.000S | E6 TONS | 1142. | 571. | 0.0 |
| LIME PROCESSING | 0.90 | LB/TON | 3.400 | 0.203 | 203.000 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 2.200 | 0.104 | 10.400 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 8.630 | 0.630 | 63.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 3.740 | 0.000 | 3.740 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GLASS - SODALIME | 0.80 | LB/TON | 1.890 | 0.020 | 2.000 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| CERAMIC CLAY | 0.80 | LB/TON | 2.750 | 1.755 | 175.500 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 5.820 | 1.800 | 92.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| MINERAL WOOL | 0.82 | LB/TON | 4.270 | 3.630 | 32.400 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| DIRECT FIRING OF MEATS | 0.62 | LB/TON | 2445.000 | 195.600 | 2445.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 0.500 | 0.150 | 42.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| FERTILIZER - AMMONIUM SULFATE | 0.84 | LB/TON | 2.040 | 1.000 | 20.000 | 0.045S | 0.116C | E6 TONS | 9.3 | 4.2 | 18.5 |
| WHISKEY | 0.95 | LB/PRD UNT | 27.900 | 2.180 | 43.600 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FERROALLOY - SUBMERGED ARC FURNACE | 0.90 | LB/TON | 22.800 | 4.560 | 456.000 | 0.028S | 0.015C | E6 TONS | 1.6 | 0.44 | 0.25 |
| CAST IRON FOUNDRY - ELEC. FURN. | 0.93 | LB/TON | 4.500 | 0.045 | 4.500 | 0.028S | 0.136S | E6 TONS | 8.1 | 2.3 | 11.0 |
| CONCRETE BATCHING | 1.00 | LB/TON | 0.098 | 0.010 | 0.100 | 0.033S | 0.030C | E6 TONS | 327. | 108. | 112. |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYDROFLUORIC ACID | 0.98 | LB/TON | 35.000 | 35.000 | 700.000 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| COAL CLEANING - THERMAL DRYING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.410 | 0.099 | 19.800 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.340 | | | | | | | | |
| IRON & STEEL - BOF | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 0.208 | 0.150 | 51.000 | 0.028S | 0.048S | E6 TONS | 88.9 | 24.9 | 42.7 |
| NEW= | 0.90 | | 0.150 | | | | | | | | |
| GRAIN HANDLING - DRYING | 0.82 | LB/TON | 0.770 | 0.060 | 6.000 | 0.037S | 0.015C | E6 TONS | 47.9 | 17.7 | 7.7 |
| SUGAR CANE - BAGASSE BURNING | 0.75 | LB/TON | 3.700 | 2.200 | 22.000 | 0.050S | 0.015S | E6 TONS | 7.0 | 3.5 | 1.0 |
| FEED MILLING - OTHER | 0.50 | LB/TON | 2.060 | 0.100 | 20.000 | 0.029S | 0.035C | E6 TONS | 21.4 | 6.2 | 8.8 |
| COTTON GINNING | 1.00 | LB/BALE | 2.090 | 0.480 | 12.000 | 0.042S | 0.013S | E6 BALE | 10.8 | 4.5 | 1.4 |
| GYPSUM | 0.80 | LB/TON | 1.510 | 0.302 | 131.700 | 0.029S | 0.006S | E6 TONS | 15.9 | 4.7 | 0.91 |
| PHOSPHATE ROCK - GRINDING | 0.94 | LB/TON | 0.940 | 0.002 | 2.000 | 0.050S | 0.043S | E6 TONS | 25.7 | 12.8 | 11.1 |
| DEEP FAT FRYING | 0.81 | LB/TON | 7.130 | 0.119 | 11.900 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PHOSPHATE ROCK - DRYING/HANDLING | 0.87 | LB/TON | 0.340 | 0.122 | 14.000 | 0.050S | 0.041S | E6 TONS | 43.9 | 21.9 | 18.0 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 1.640 | 0.254 | 12.720 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FERTILIZER - DAP | 0.89 | LB/TON | 3.530 | 1.640 | 82.000 | 0.045S | 0.054S | E6 TONS | 3.1 | 1.4 | 1.7 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 0.70 | LB/TON | 8.640 | 8.640 | 96.000 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SODIUM CARBONATE - NATURAL | 0.87 | LB/TON | 1.160 | 0.450 | 90.000 | 0.045S | 0.130C | E6 TONS | 5.8 | 2.6 | 13.8 |
| CHARCOAL | 0.85 | LB/TON | 19.500 | 3.500 | 352.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BEER PROCESSING | 0.81 | LB/TON | 2.090 | 0.270 | 5.450 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| IRON AND STEEL - SCARFING | 0.90 | LB/TON | 0.138 | 0.030 | 3.000 | 0.028S | 0.029S | E6 TONS | 87.3 | 24.4 | 25.3 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 3.180 | 0.350 | 35.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 3.000 | 3.000 | 24.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PS | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 1.550 | 1.350 | 50.400 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 3.100 | 2.200 | 220.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| ASPHALT SATURATOR | 0.90 | LB/TON | 1.330 | 0.073 | 7.300 | 0.042S | 0.025S | E6 TONS | 6.3 | 2.6 | 1.6 |
| SLUDGE INCINERATION | | | | | | | | | | | |
| EXIST= | 0.50 | LB/TON | 5.000 | 1.600 | 119.000 | 0.033S | 0.250S | E6 TONS | 1.2 | 0.39 | 2.9 |
| NEW= | 0.50 | | 1.600 | | | | | | | | |
| SEC ALUMINUM - REVERB FURNACE | 0.82 | LB/TON | 4.800 | 0.960 | 195.000 | 0.036S | 0.047S | E6 TONS | 1.4 | 0.51 | 0.67 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 3.960 | 1.670 | 1665.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 2.250 | | | | | | | | |
| STARCH | 0.83 | LB/TON | 2.000 | 0.020 | 8.000 | 0.045S | 0.018C | E6 TONS | 4.3 | 1.9 | 0.83 |
| SECONDARY COPPER - SMELTING | 0.82 | LB/TON | 3.470 | 0.338 | 84.600 | 0.035S | 0.037C | E6 TONS | 1.8 | 0.64 | 0.82 |
| DETERGENT | 0.90 | LB/TON | 1.500 | 0.450 | 90.000 | 0.000S | 0.035C | E6 TONS | 2.5 | 0.0 | 1.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 5.000 | 1.020 | 101.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SYNTHETIC FIBER - NYLON | 0.72 | LB/TON | 1.530 | 0.750 | 15.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.77 | 4.0 |
| SYNTHETIC FIBER - DACRON | 0.68 | LB/TON | 1.580 | 0.350 | 7.000 | 0.045S | 0.164C | E6 TONS | 2.3 | 1.0 | 8.2 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 1.180 | 0.000 | 1.180 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| FRIT MANUFACTURING | 0.80 | LB/TON | 5.800 | 1.780 | 17.800 | 0.033S | 0.037S | E6 TONS | 0.84 | 0.28 | 0.31 |
| POLYPROPYLENE | 0.78 | LB/TON | 2.670 | 0.030 | 3.000 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| FEED MILLING - ALFALFA DEHYDR. | 0.50 | LB/TON | 2.060 | 0.250 | 50.000 | 0.029S | 0.035C | E6 TONS | 4.1 | 1.2 | 1.7 |
| FET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 20.000 | 3.000 | 20.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SECONDARY COPPER - HANDLING | 0.82 | LB/TON | 6.640 | 0.848 | 212.000 | 0.035S | 0.037C | E6 TONS | 0.73 | 0.25 | 0.32 |
| SECONDARY LEAD - REVERB | | | | | | | | | | | |
| EXIST= | 0.68 | LB/TON | 6.440 | 1.050 | 277.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| NEW= | 0.68 | | 1.250 | | | | | | | | |
| PULPBOARD | 0.98 | LB/TON | 0.096 | 0.014 | 0.096 | 0.031S | 0.015C | E6 TONS | 37.2 | 11.5 | 6.0 |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS - POLYESTER | 0.68 | LB/TON | 4.100 | 0.350 | 7.000 | 0.045S | 0.170C | E6 TONS | 1.0 | 0.46 | 3.9 |
| FLY ASH SINTERING | 0.86 | LB/TON | 0.400 | 0.110 | 110.000 | 0.033S | 0.055C | E6 TONS | 7.7 | 2.5 | 5.4 |
| CASTABLE REFRACTORY | 0.80 | LB/TON | 5.320 | 4.620 | 254.000 | 0.033S | 0.043C | E6 TONS | 0.39 | 0.13 | 0.20 |
| ASPHALT BLOWING | 0.90 | LB/TON | 1.180 | 0.042 | 4.200 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PHOSPHATE ROCK - CALCINING | 0.90 | LB/TON | 0.960 | 0.400 | 40.000 | 0.050S | 0.048S | E6 TONS | 2.5 | 1.3 | 1.2 |
| PERLITE | 0.82 | LB/TON | 4.350 | 0.840 | 21.000 | 0.029S | 0.036S | E6 TONS | 0.65 | 0.19 | 0.23 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 0.70 | LB/TON | 2.780 | 1.460 | 84.000 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| MINING MILLING LEAD ORE | 0.92 | LB/TON | 4.170 | 2.090 | 4.170 | 0.050S | 0.000 | E6 TONS | 0.62 | 0.31 | 0.0 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.93 | LB/TON | 3.060 | 1.190 | 790.000 | 0.036S | 0.000 | E6 TONS | 0.76 | 0.29 | 0.0 |
| NEW* | 0.85 | | 3.060 | | | | | | | | |
| PHOSPHORIC ACID - THERMAL PROCESS | 0.81 | LB/TON | 2.270 | 0.134 | 134.000 | 0.045S | 0.014C | E6 TONS | 1.4 | 0.63 | 0.21 |
| PAINT MANUFACTURING | 0.83 | LB/TON | 1.000 | 0.001 | 1.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| SEC ALUMINUM - SWEAT FURNACE | 0.68 | LB/TON | 7.360 | 1.980 | 33.000 | 0.036S | 0.047S | E6 TONS | 0.30 | 0.11 | 0.14 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 0.700 | 0.120 | 0.700 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| LEAD ACID BATTERY | 0.76 | LB/PRD UNT | 0.032 | 0.000 | 0.130 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SECONDARY ZINC - DISTILLATION | 0.82 | LB/TON | 2.710 | 1.700 | 46.000 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| CLAY SINTERING | 0.80 | LB/TON | 2.410 | 0.026 | 26.000 | 0.033S | 0.027S | E6 TONS | 0.74 | 0.24 | 0.20 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.794 | 0.440 | 7.200 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATION | 0.90 | LB/PRD UNT | 1.970 | 0.540 | 2.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SMOKED MEAT | 0.81 | LB/TON | 0.300 | 0.100 | 0.300 | 0.040S | 0.017S | E6 TONS | 3.6 | 1.4 | 0.61 |
| BRASS & BRONZE SMELTING | | | | | | | | | | | |
| EXIST* | 0.80 | LB/TON | 3.250 | 0.280 | 70.000 | 0.036S | 0.000S | E6 TONS | 0.38 | 0.13 | 0.0 |
| NEW* | 0.80 | | 1.200 | | | | | | | | |

PARTICULATES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FERTILIZER GTSP STORAGE | 0.76 | LB/TON | 1.110 | 0.022 | 2.170 | 0.045S | 0.042C | E6 TONS | 1.2 | 0.53 | 0.60 |
| GLASS - OPAL | 0.80 | LB/TON | 2.240 | 0.022 | 2.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| SECONDARY ZINC - SWEATING | 0.82 | LB/TON | 3.860 | 0.872 | 23.600 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.070 | 0.093 |
| ANIMAL FEED DEFLUORINATION | 0.90 | LB/TON | 4.570 | 0.063 | 625.000 | 0.040S | 0.000S | E6 TONS | 0.20 | 0.080 | 0.0 |
| SECONDARY LEAD - BLAST | | | | | | | | | | | |
| EXIST* | 0.68 | LB/TON | 4.350 | 1.050 | 271.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| NEW* | 0.68 | | 1.250 | | | | | | | | |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.007 | 0.000 | 0.007 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| SOAP | 0.90 | LB/TON | 0.724 | 0.026 | 13.000 | 0.045S | 0.000S | E6 TONS | 0.55 | 0.25 | 0.0 |
| PATHOLOGICAL INCINERATION | | | | | | | | | | | |
| EXIST* | 0.34 | LB/TON | 4.600 | 1.900 | 12.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NEW* | 0.34 | | 3.800 | | | | | | | | |
| FISH MEAL PROCESSING | 0.81 | LB/TON | 0.400 | 0.040 | 0.400 | 0.008S | 0.000C | E6 TONS | 0.36 | 0.029 | 0.0 |
| SEC MAGNESIUM | 0.82 | LB/TON | 6.780 | 0.680 | 6.780 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SECONDARY LEAD - POT FURNACE | 0.68 | LB/TON | 1.360 | 0.041 | 1.360 | 0.024S | 0.032C | E6 TONS | 0.065 | 0.016 | 0.024 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CEMENT PLANTS | 18749. | 9548. | 7161. | 10464. | 7179. | 7173. | 5200. | 0.297 |
| BLR >250 E6 BTU/HR | 43153. | 2250. | 1125. | 12632. | 2106. | 1616. | 490000. | 0.500 |
| BLR 10-250 E6 BTU/HR | 7255. | 1197. | 599. | 3157. | 1276. | 856. | 419000. | 0.620 |
| BOILERS .3-10 MM BTU/HR | 1260. | 827. | 521. | 521. | 1260. | 663. | 597000. | 0.808 |
| STONE QUARRYING AND PROCESSING | 10101. | 186. | 92.9 | 3798. | 247. | 156. | 91100. | 0.591 |
| GRAIN HANDLING - PROCESSING | 684. | 212. | 134. | 371. | 246. | 135. | 111000. | 0.986 |
| GRAIN HANDLING - TRANSFER | 2280. | 191. | 120. | 1238. | 221. | 130. | 90600. | 0.897 |
| COKE OVENS - BY PRODUCT | 189. | 172. | 124. | 124. | 189. | 130. | 59600. | 0.912 |
| ASPHALT BATCHING | 7826. | 131. | 120. | 4800. | 154. | 129. | 25000. | 0.734 |
| • BOILERS <.3 MM BTU/HR | 191. | 144. | 115. | 115. | 191. | 115. | 76300. | 1.000 |
| WOOD PULPING KRAFT | 3706. | 93.5 | 64.5 | 2269. | 105. | 105. | 0.0 | 0.000 |
| IRON AND STEEL - BLAST FURNACE | 10336. | 80.1 | 57.7 | 5769. | 103. | 103. | 0.0 | 0.000 |
| GRAIN HANDLING - SCREENING | 684. | 158. | 99.6 | 371. | 184. | 103. | 80700. | 0.963 |
| WOOD WASTE BOILERS | 1464. | 142. | 71.1 | 650. | 160. | 79.4 | 80800. | 0.907 |
| IRON & STEEL - EAF | 809. | 74.2 | 53.4 | 337. | 70.1 | 61.4 | 8600. | 0.520 |
| BRICK & RELATED CLAY PRODUCTS | 2367. | 39.6 | 26.5 | 1249. | 50.2 | 37.8 | 12400. | 0.523 |
| PETROLEUM REFNRY FCCU | 234. | 42.2 | 29.1 | 107. | 38.1 | 34.4 | 3600. | 0.412 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 36.1 | 28.2 | 22.5 | 22.5 | 36.1 | 34.1 | 2000. | 0.148 |
| MUNICIPAL INCINERATION | 262. | 41.9 | 25.5 | 109. | 36.8 | 33.2 | 3600. | 0.322 |
| PLYWOOD - VENEER | 1814. | 42.9 | 21.5 | 709. | 55.0 | 32.4 | 22600. | 0.675 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| MIXED FUEL BOILERS - COAL & REFUSE | 2879. | 0.23 | 0.23 | 16.6 | 39.3 | 28.9 | 10400. | 0.268 |
| PRIMARY COPPER | 557. | 38.8 | 24.8 | 265. | 52.2 | 25.7 | 26400. | 0.968 |
| INDUSTRIAL/COMMERCIAL INCINERATION | 114. | 40.1 | 24.4 | 24.4 | 114. | 25.3 | 88400. | 0.990 |
| SAND AND GRAVEL PROCESSING | 45.7 | 45.7 | 22.8 | 22.8 | 45.7 | 24.0 | 21600. | 0.950 |
| LIME PROCESSING | 3891. | 40.0 | 20.0 | 1194. | 65.2 | 22.7 | 42400. | 0.940 |
| STEEL FOUNDRIES | 237. | 29.0 | 20.9 | 98.7 | 50.2 | 22.3 | 27900. | 0.953 |
| VEGETABLE OIL PRODUCTION | 240. | 25.9 | 18.6 | 136. | 32.9 | 19.7 | 13100. | 0.927 |
| • GAS TURBINE ENGINES ELECTRIC UTILITIES | 82.3 | 22.3 | 17.8 | 17.8 | 82.3 | 17.8 | 64500. | 1.000 |
| GLASS - SODALIME | 35.3 | 26.0 | 17.4 | 18.5 | 33.3 | 17.6 | 15700. | 0.989 |
| CERAMIC CLAY | 1384. | 15.3 | 10.2 | 653. | 21.7 | 17.5 | 4100. | 0.362 |
| PRIMARY ALUMINUM SMELTERS | 523. | 16.1 | 10.4 | 165. | 33.1 | 17.5 | 15600. | 0.691 |
| MINERAL WOOL | 135. | 14.8 | 10.4 | 79.1 | 17.7 | 16.6 | 1000. | 0.150 |
| DIRECT FIRING OF MEATS | 34.0 | 25.5 | 12.8 | 12.8 | 34.0 | 14.5 | 19500. | 0.920 |
| IRON AND STEEL - SINTERING | 1697. | 15.7 | 11.3 | 947. | 20.2 | 14.0 | 6200. | 0.700 |
| FERTILIZER - AMMONIUM SULFATE | 233. | 7.9 | 4.4 | 42.8 | 23.8 | 13.9 | 9900. | 0.510 |
| WHISKEY | 43.2 | 17.3 | 11.8 | 18.4 | 27.6 | 13.0 | 14600. | 0.922 |
| FERROALLOY - SUBMERGED ARC FURNACE | 372. | 16.0 | 11.5 | 230. | 18.6 | 12.9 | 5600. | 0.800 |
| CAST IRON FOUNDRY - ELEC. FURN. | 40.0 | 16.9 | 12.2 | 12.2 | 40.0 | 12.5 | 27500. | 0.990 |
| CONCRETE BATCHING | 21.9 | 16.0 | 10.7 | 10.9 | 21.5 | 11.8 | 9600. | 0.898 |
| HYDROFLUORIC ACID | 229. | 7.7 | 4.2 | 84.7 | 11.5 | 11.5 | 0.0 | 0.000 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UC 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| COAL CLEANING - THERMAL DRYING | 1002. | 16.1 | 8.0 | 388. | 18.6 | 11.1 | 7400. | 0.709 |
| IRON & STEEL - BOF | 3020. | 8.3 | 6.0 | 1469. | 10.6 | 10.6 | 0.0 | 0.000 |
| GRAIN HANDLING - DRYING | 137. | 15.1 | 9.5 | 74.2 | 17.5 | 10.2 | 7300. | 0.922 |
| SUGAR CANE - BAGASSE BURNING | 66.4 | 9.7 | 4.9 | 28.9 | 11.2 | 8.6 | 2500. | 0.405 |
| FEED MILLING - OTHER | 151. | 11.0 | 7.8 | 75.9 | 15.5 | 8.2 | 7300. | 0.951 |
| COTTON GINNING | 73.2 | 11.3 | 6.5 | 37.6 | 12.8 | 8.0 | 4700. | 0.770 |
| GYPSUM | 886. | 9.6 | 6.8 | 592. | 10.2 | 7.5 | 2700. | 0.500 |
| PHOSPHATE ROCK - GRINDING | 34.5 | 11.4 | 5.7 | 12.1 | 16.2 | 5.7 | 10500. | 0.998 |
| DEEP FAT FRYING | 19.4 | 7.6 | 5.5 | 9.2 | 11.6 | 5.6 | 6000. | 0.983 |
| PHOSPHATE ROCK - DRYING/HANDLING | 377. | 6.5 | 3.2 | 134. | 9.2 | 5.4 | 3700. | 0.641 |
| FERTILIZER - NITRATES | 101. | 6.6 | 3.6 | 28.3 | 13.1 | 5.1 | 7900. | 0.845 |
| FERTILIZER - DAP | 176. | 4.9 | 2.7 | 63.0 | 7.6 | 5.0 | 2600. | 0.535 |
| FIBERGLASS MFG.-WOOL PRODUCTS | 55.0 | 3.3 | 1.2 | 13.7 | 4.9 | 4.9 | 0.0 | 0.000 |
| SODIUM CARBONATE - NATURAL | 764. | 2.9 | 1.6 | 124. | 9.8 | 4.8 | 5000. | 0.612 |
| CHARCOAL | 181. | 6.6 | 3.6 | 65.4 | 10.0 | 4.8 | 5200. | 0.821 |
| BEER PROCESSING | 31.3 | 6.1 | 3.7 | 9.5 | 12.0 | 4.7 | 7200. | 0.671 |
| IRON AND STEEL - SCARFING | 152. | 5.4 | 3.9 | 84.9 | 7.0 | 4.6 | 2400. | 0.783 |
| POLYVINYL CHLORIDE | 83.3 | 3.6 | 3.6 | 39.2 | 7.6 | 4.0 | 3500. | 0.890 |
| WOOD PULPING SULFITE | 31.8 | 3.5 | 2.4 | 19.5 | 4.0 | 4.0 | 0.0 | 0.000 |
| EXPLOSIVES - HIGH | 94.4 | 1.2 | 0.65 | 21.1 | 2.9 | 2.6 | 290. | 0.129 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| CARBON BLACK - FURNACE PROCESS | 215. | 2.4 | 1.3 | 92.6 | 3.0 | 2.5 | 500. | 0.290 |
| ASPHALT SATURATOR | 25.8 | 3.8 | 2.2 | 12.0 | 4.7 | 2.3 | 2300. | 0.945 |
| SLUDGE INCINERATION | 122. | 1.5 | 0.98 | 23.4 | 2.3 | 2.3 | 0.0 | -0.000 |
| SEC ALUMINUM - REVERB FURNACE | 167. | 2.8 | 1.8 | 73.1 | 4.1 | 2.3 | 1800. | 0.800 |
| PRIMARY ZINC SMELTERS | 1267. | 2.1 | 1.3 | 575. | 2.3 | 2.0 | 240. | 0.258 |
| STARCH | 16.9 | 3.5 | 1.9 | 7.6 | 4.2 | 2.0 | 2200. | 0.990 |
| SECONDARY COPPER - SMELTING | 92.2 | 2.6 | 1.7 | 41.5 | 3.8 | 1.9 | 1800. | 0.903 |
| DETERGENT | 143. | 1.7 | 1.7 | 101. | 2.4 | 1.9 | 480. | 0.700 |
| MIXED FUEL BOILERS - OIL & REFUSE | 184. | 0.052 | 0.052 | 1.1 | 9.1 | 1.9 | 7100. | 0.796 |
| SYNTHETIC FIBER - NYLON | 30.6 | 0.94 | 0.52 | 5.1 | 3.1 | 1.8 | 1300. | 0.510 |
| SYNTHETIC FIBER - DACRON | 24.9 | 1.2 | 0.68 | 3.0 | 5.6 | 1.8 | 3800. | 0.778 |
| * GAS TURBINE ENGINES GAS PIPELINE | 5.4 | 2.2 | 1.8 | 1.8 | 5.4 | 1.8 | 3600. | 1.000 |
| FRIT MANUFACTURING | 8.2 | 1.9 | 1.3 | 4.0 | 2.7 | 1.7 | 940. | 0.693 |
| POLYPROPYLENE | 7.6 | 1.7 | 1.6 | 1.8 | 6.7 | 1.7 | 5000. | 0.989 |
| FEED MILLING - ALFALFA DEHYDR. | 71.9 | 2.1 | 1.5 | 36.2 | 3.0 | 1.7 | 1200. | 0.879 |
| PET REF - PROC GAS COMB | 2.9 | 1.9 | 1.3 | 1.3 | 2.9 | 1.6 | 1300. | 0.850 |
| SECONDARY COPPER - HANDLING | 91.2 | 2.0 | 1.3 | 41.1 | 2.9 | 1.5 | 1300. | 0.872 |
| SECONDARY LEAD - REVERB | 92.0 | 1.6 | 1.2 | 51.0 | 1.4 | 1.3 | 20.0 | 0.160 |
| PULPBOARD | 2.0 | 1.7 | 1.2 | 1.2 | 2.0 | 1.3 | 700. | 0.654 |
| SYNTHETIC RESINS - POLYESTER | 11.7 | 1.4 | 0.79 | 1.[illegible] | 6.8 | 1.3 | 5500. | 0.915 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| FLY ASH SINTERING | 621. | 1.3 | 0.89 | 243. | 2.3 | 1.3 | 990. | 0.725 |
| CASTABLE REFRACTORY | 59.9 | 0.82 | 0.55 | 26.3 | 1.3 | 1.2 | 90.0 | 0.132 |
| ASPHALT BLOWING | 7.4 | 1.7 | 0.97 | 3.5 | 2.1 | 1.0 | 1000. | 0.964 |
| PHOSPHATE ROCK - CALCINING | 67.9 | 1.1 | 0.55 | 22.9 | 1.6 | 1.0 | 620. | 0.583 |
| PERLITE | 7.6 | 1.2 | 0.81 | 3.9 | 1.6 | 0.96 | 600. | 0.807 |
| FIBERGLASS MFG.-TEXTILE PRODUCTS | 48.2 | 0.50 | 0.19 | 5.7 | 1.6 | 0.93 | 660. | 0.475 |
| MINING/MILLING LEAD ORE | 1.2 | 1.2 | 0.60 | 0.60 | 1.2 | 0.90 | 290. | 0.499 |
| PRIMARY LEAD SMELTERS | 272. | 1.2 | 0.64 | 164. | 1.1 | 0.80 | 250. | 0.611 |
| PHOSPHORIC ACID - THERMAL PROCESS | 86.7 | 1.3 | 0.70 | 41.5 | 1.5 | 0.75 | 720. | 0.941 |
| PAINT MANUFACTURING | 2.7 | 2.0 | 0.68 | 0.68 | 2.7 | 0.68 | 1900. | 0.999 |
| SEC ALUMINUM - SWEAT FURNACE | 5.0 | 0.76 | 0.49 | 2.2 | 1.1 | 0.65 | 450. | 0.731 |
| STYRENE - BUTADIENE RUBBER | 0.75 | 0.62 | 0.60 | 0.60 | 0.75 | 0.62 | 120. | 0.829 |
| LEAD ACID BATTERY | 6.4 | 0.97 | 0.58 | 2.4 | 1.6 | 0.59 | 990. | 0.996 |
| SECONDARY ZINC - DISTILLATION | 10.5 | 0.42 | 0.27 | 4.7 | 0.62 | 0.49 | 120. | 0.373 |
| CLAY SINTERING | 9.8 | 0.71 | 0.49 | 5.2 | 0.91 | 0.48 | 420. | 0.989 |
| COFFEE ROASTING | 4.8 | 0.52 | 0.31 | 2.9 | 0.52 | 0.43 | 90.0 | 0.446 |
| AUTOBODY INCINERATION | 1.0 | 0.26 | 0.16 | 0.16 | 0.99 | 0.39 | 600. | 0.726 |
| SMOKED MEAT | 0.51 | 0.44 | 0.26 | 0.26 | 0.51 | 0.35 | 160. | 0.667 |
| BRASS & BRONZE SMELTING | 10.5 | 0.49 | 0.31 | 6.7 | 0.38 | 0.33 | 40.0 | 0.767 |
| FERTILIZER GTSP STORAGE | 1.5 | 0.50 | 0.27 | 0.54 | 0.75 | 0.28 | 460. | 0.980 |

PARTICULATES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| GLASS - OPAL | 0.52 | 0.41 | 0.27 | 0.27 | 0.52 | 0.28 | 240. | 0.990 |
| SECONDARY ZINC - SWEATING | 2.8 | 0.32 | 0.21 | 1.3 | 0.46 | 0.26 | 190. | 0.774 |
| ANIMAL FEED DEFLUORINATION | 56.2 | 0.41 | 0.25 | 33.8 | 0.41 | 0.25 | 160. | 0.936 |
| SECONDARY LEAD - BLAST | 18.7 | 0.22 | 0.17 | 10.4 | 0.20 | 0.20 | 6.1 | 0.160 |
| * ORCHARD HEATERS | 0.27 | 0.21 | 0.14 | 0.14 | 0.27 | 0.14 | 120. | 1.000 |
| SOAP | 3.2 | 0.18 | 0.099 | 1.8 | 0.18 | 0.10 | 70.0 | 0.964 |
| PATHOLOGICAL INCINERATION | 0.37 | 0.10 | 0.062 | 0.17 | 0.12 | 0.091 | 20.0 | 0.500 |
| FISH MEAL PROCESSING | 0.058 | 0.058 | 0.054 | 0.054 | 0.058 | 0.054 | 4.2 | 0.900 |
| SEC MAGNESIUM | 0.056 | 0.049 | 0.032 | 0.032 | 0.056 | 0.034 | 20.0 | 0.900 |
| SECONDARY LEAD - POT FURNACE | 0.041 | 0.030 | 0.023 | 0.023 | 0.041 | 0.023 | 10.0 | 0.970 |

RANKED DATA FOR $NO_x$

A

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| * BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| * STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| * CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

B

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| * BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| * STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| * CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.5 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |

C

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |

$E_N$

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMBUSTION ENGS SP. IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST. | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW. | 0.88 | | 3.000 | | | | | | | | |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW. | 0.58 | | 0.534 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| BLR 10-250 E6 BTU/HR EXIST. | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.411 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BOILERS <.3 MM BTO/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| CMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| BLR 10-250 E6 BTU/HR | 1498. | 1[illegible] | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| • BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.96 | 0.31 | 0.17 | 130. | 1.000 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |

$E_S$ (Existing)

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST* | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW* | 0.88 | | 3.000 | | | | | | | | |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| • BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |

$E_S$ (New)

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| NITRIC ACID | | | | | | | | |
| BLR >250 E6 BTU/HR | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| BLR 10-250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |

$\underline{E_U}$

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST. | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW. | 0.88 | | 3.000 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB. TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BOILERS <.3 MM BTO/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | TU 1985 | TA 1975 | TE 1985 | TUE 1985 | TS 1985 | TN 1985 | TS-TN 1985 | 1 - EN/ES |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 562[illegible]0. | 0.098 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| • BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |

$\underline{1 - E_N/E_S}$

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW* | 0.32 | | 0.411 | | | | | | | | |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| BOILERS <.3 MM BTO/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| * STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| * BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| * CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.423 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| BOILERS <.3 MM BTO/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |

$P_C$ (Compound)

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST. | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 0.411 | | | | | | | | |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| BLR >250 E6 BTU/HR | 8311. | 4725. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| * BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |

$P_C$ (Simple)

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |

K

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SEC LEAD - BL/ST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW* | 0.58 | | 0.534 | | | | | | | | |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.5 | 12.7 | 60.0 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW* | 0.32 | | 0.411 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| * STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.56 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| • BOILERS <.3 MM BTO/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.332 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | | | | | | | | | | | |
| | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| INTERNAL COMBUSTION ENGS D/DF | | | | | | | | | | | |
| | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PORTLAND CEMENT | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PET REF - PROC GAS COMB | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| EXPLOSIVES - LOW | | | | | | | | | | | |
| | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ADIPIC ACID | | | | | | | | | | | |
| | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| FIBERGLAS MANUF - TEXTILE | | | | | | | | | | | |
| | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UF 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | | | | | | | | | | | |
| | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| INTERNAL COMBUSTION ENGS D/DF | | | | | | | | | | | |
| | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PORTLAND CEMENT | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PET REF - FUEL GAS COMB | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | | | | | | | | | | | |
| | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ADIPIC ACID | | | | | | | | | | | |
| | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| STEEL FOUNDRIES | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES NES | EMISSION RATES UNCONTEU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE F S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |

# NITROGEN OXIDES

## SUMMARY OF INPUT/OUTPUT VARIABLES FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| COFFEE ROASTING | 0.65 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 43.8 | 36.0 | 18.8 | 17100. | 1.000 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.5 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| • CERAMIC CLAY | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| • COKE OVENS - BY PRODUCT | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| OMT/TPA NITRIC ACID OXIDATION | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| FIBERGLAS MANUF - TEXTILE | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| • SEC LEAD - REVERB FURN | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| • GLASS - OPAL | 1.8 | 0.23 | 0.17 | 0.58 | 0.31 | 0.17 | 130. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • MINERAL WOOL | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.66 | 0.55 | 0.39 | 0.33 | 0.66 | 0.53 | 130. | 0.500 |
| • PATHOLOGICAL INCINERATOR | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| • FERTILIZER - NITRATES | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| • COFFEE ROASTING | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| AUTOBODY INCINERATORS | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| • SEC ZINC - DISTILLATION | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • SEC LEAD - BLAST FURN | 0.01[illegible] | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC ZINC - SWEAT | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC MAGNESIUM | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE FS | EMISSION RATES EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW* | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | | | | | | | | | | | |
| | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW* | 0.32 | | 0.411 | | | | | | | | |
| INTERNAL COMBUSTION ENGS D/DF | | | | | | | | | | | |
| | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PORTLAND CEMENT | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST* | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW* | 0.88 | | 3.000 | | | | | | | | |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| PET REF - PROC GAS COMB | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| EXPLOSIVES - LOW | | | | | | | | | | | |
| | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| FIBERGLAS MANUF - TEXTILE | | | | | | | | | | | |
| | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| CYT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| * BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| * STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| * CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| * COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| * FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| * PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| * MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| * GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| * SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| * COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| * SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| * SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| * SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| * SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.1[illegible] | 0.59 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SEC ZINC - DISTILLATION | 0.80 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.564 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| • BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| • GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.330 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| • LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| • BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

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NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 0.582 | 0.428 | 0.599 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.534 | | | | | | | | |
| INTERNAL COMBUSTION ENGS SPK IGN | 0.58 | LB/TON | 230.000 | 131.000 | 230.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| INTERNAL COMBUSTION ENGS D/DF | 0.58 | LB/TON | 179.000 | 123.000 | 179.000 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 0.415 | 0.138 | 0.417 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 0.411 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.194 | 0.175 | 0.194 | 0.037S | 0.043C | E12 BTU | 26491. | 9802. | 13868. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 72.700 | 10.900 | 72.700 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.081 | 0.040 | 0.081 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PORTLAND CEMENT | 0.90 | LB/TON | 2.600 | 1.690 | 2.600 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 35.000 | 15.000 | 37.500 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 60.500 | 9.080 | 60.500 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 169.000 | 11.500 | 169.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| NITRIC ACID | | | | | | | | | | | |
| EXIST= | 0.88 | LB/TON | 22.300 | 2.000 | 52.500 | 0.050S | 0.078C | E6 TONS | 11.4 | 5.7 | 12.8 |
| NEW= | 0.88 | | 3.000 | | | | | | | | |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.000 | 1.100 | 3.000 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 15.000 | 13.800 | 34.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| PET REF - PROC GAS COMB | 0.85 | LB/E6 BTU | 230.000 | 115.000 | 230.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| GLASS - SODA LIME | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 0.38 | LB/TON | 1.870 | 0.650 | 1.870 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| LIME PROCESSING | 0.90 | LB/TON | 0.834 | 0.417 | 0.834 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 41.500 | 2.910 | 41.500 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |

NITROGEN OXIDES

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 1.00 | LB/TON | 12.000 | 1.200 | 12.000 | 0.015C | 0.055C | E6 TONS | 0.84 | 0.13 | 0.59 |
| CERAMIC CLAY | 0.80 | LB/TON | 0.465 | 0.233 | 0.465 | 0.033S | 0.042S | E6 TONS | 13.9 | 4.6 | 5.8 |
| FIBERGLAS MANUF - TEXTILE | 0.70 | LB/TON | 15.300 | 2.870 | 15.300 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| STEEL FOUNDRIES | 0.90 | LB/TON | 0.200 | 0.000 | 0.200 | 0.028S | 0.073S | E6 TONS | 29.3 | 8.2 | 21.4 |
| DMT/TPA NITRIC ACID OXIDATION | 0.85 | LB/TON | 13.000 | 1.300 | 13.000 | 0.045S | 0.073C | E6 TONS | 0.38 | 0.17 | 0.39 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 0.054 | 0.000 | 0.054 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| FIBERGLASS MFG. WOOL PRODUCTS | 0.70 | LB/TON | 3.620 | 1.570 | 3.620 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| MINERAL WOOL | 0.82 | LB/TON | 0.160 | 0.080 | 0.160 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 25.000 | 0.000 | 25.000 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FERTILIZER - NITRATES | 0.77 | LB/TON | 0.125 | 0.000 | 0.125 | 0.045S | 0.070C | E6 TONS | 10.5 | 4.7 | 10.2 |
| GLASS - OPAL | 0.80 | LB/TON | 2.040 | 0.000 | 5.290 | 0.033S | 0.028C | E6 TONS | 0.46 | 0.15 | 0.15 |
| SEC LEAD - REVERB FURN | 0.68 | LB/TON | 0.938 | 0.000 | 5.320 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| COFFEE ROASTING | 0.85 | LB/TON | 0.100 | 0.050 | 0.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 0.100 | 0.020 | 0.100 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| SEC ZINC - DISTILLATION | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.38 | 0.13 | 0.18 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 0.157 | 0.000 | 0.157 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC ZINC - SWEAT | 0.82 | LB/TON | 0.072 | 0.000 | 0.072 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SEC MAGNESIUM | 0.82 | LB/TON | 0.347 | 0.000 | 0.347 | 0.035S | 0.016S | E6 TONS | 0.017 | 0.0061 | 0.0028 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 8311. | 4728. | 2364. | 2433. | 7604. | 6564. | 1040000. | 0.199 |
| INTERNAL COMBUSTION ENGS SPK IGN | 3585. | 1917. | 1534. | 1534. | 3585. | 2702. | 882000. | 0.430 |
| INTERNAL COMBUSTION ENGS D/DF | 1193. | 932. | 746. | 746. | 1193. | 1053. | 140000. | 0.313 |
| BLR 10-250 E6 BTU/HR | 1498. | 1297. | 649. | 652. | 1482. | 929. | 553000. | 0.664 |
| BOILERS .3-10 MM BTU/HR | 979. | 642. | 405. | 405. | 979. | 922. | 56200. | 0.098 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 1601. | 433. | 346. | 346. | 1601. | 534. | 1060000. | 0.850 |
| * BOILERS <.3 MM BTU/HR | 397. | 299. | 239. | 239. | 397. | 317. | 80200. | 0.506 |
| PORTLAND CEMENT | 162. | 121. | 90.4 | 90.4 | 162. | 137. | 25000. | 0.350 |
| MIXED FUEL BOILERS - COAL & REFUSE | 295. | 1.6 | 1.6 | 1.7 | 275. | 119. | 156000. | 0.571 |
| GAS TURBINE ENGINES GAS PIPELINE | 277. | 113. | 90.3 | 90.3 | 277. | 118. | 158000. | 0.850 |
| EXPLOSIVES - HIGH | 316. | 129. | 70.9 | 70.9 | 316. | 87.6 | 228000. | 0.932 |
| NITRIC ACID | 558. | 112. | 55.9 | 132. | 80.3 | 72.2 | 8100. | 0.333 |
| MUNICIPAL INCINERATORS | 39.9 | 27.3 | 16.7 | 16.7 | 39.9 | 25.2 | 14600. | 0.633 |
| MIXED FUEL BOILERS - OIL & REFUSE | 62.6 | 0.16 | 0.16 | 0.36 | 27.2 | 25.1 | 2100. | 0.080 |
| PET REF - PROC GAS COMB | 33.4 | 22.1 | 15.2 | 15.2 | 33.4 | 24.3 | 9000. | 0.500 |
| * GLASS - SODA LIME | 93.3 | 28.1 | 18.8 | 48.8 | 36.0 | 18.8 | 17100. | 1.000 |
| INDUSTRIAL/COMMERCIAL INCINERATORS | 32.9 | 11.6 | 7.1 | 7.1 | 32.9 | 16.0 | 16800. | 0.652 |
| * LIME PROCESSING | 16.0 | 9.8 | 4.9 | 4.9 | 16.0 | 10.4 | 5500. | 0.500 |
| * BRICK & RELATED CLAY PRODUCTS | 8.4 | 6.6 | 4.4 | 4.4 | 8.4 | 6.4 | 1900. | 0.499 |
| EXPLOSIVES - LOW | 22.0 | 8.9 | 4.9 | 4.9 | 22.0 | 6.1 | 15800. | 0.930 |

NITROGEN OXIDES

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| ADIPIC ACID | 8.6 | 5.0 | 4.2 | 4.2 | 8.6 | 4.7 | 3900. | 0.900 |
| • CERAMIC CLAY | 3.7 | 2.6 | 1.7 | 1.7 | 3.7 | 2.7 | 960. | 0.499 |
| FIBERGLAS MANUF - TEXTILE | 8.8 | 2.8 | 1.0 | 1.0 | 8.8 | 2.5 | 6200. | 0.812 |
| • STEEL FOUNDRIES | 4.6 | 2.6 | 1.9 | 1.9 | 4.6 | 1.9 | 2600. | 1.000 |
| DMT/TPA NITRIC ACID OXIDATION | 4.2 | 2.1 | 1.2 | 1.2 | 4.2 | 1.5 | 2700. | 0.900 |
| • COKE OVENS - BY PRODUCT | 2.1 | 1.9 | 1.4 | 1.4 | 2.1 | 1.4 | 720. | 1.000 |
| FIBERGLASS MFG. WOOL PRODUCTS | 2.1 | 1.4 | 0.52 | 0.52 | 2.1 | 1.2 | 880. | 0.566 |
| • MINERAL WOOL | 0.66 | 0.55 | 0.39 | 0.39 | 0.66 | 0.53 | 130. | 0.500 |
| • PATHOLOGICAL INCINERATOR | 0.71 | 0.55 | 0.34 | 0.34 | 0.71 | 0.34 | 370. | 1.000 |
| • FERTILIZER - NITRATES | 0.99 | 0.51 | 0.28 | 0.28 | 0.99 | 0.28 | 710. | 1.000 |
| • GLASS - OPAL | 1.3 | 0.37 | 0.25 | 0.65 | 0.49 | 0.25 | 240. | 1.000 |
| • SEC LEAD - REVERB FURN | 1.8 | 0.23 | 0.17 | 0.98 | 0.31 | 0.17 | 130. | 1.000 |
| • COFFEE ROASTING | 0.066 | 0.066 | 0.040 | 0.040 | 0.066 | 0.053 | 10.0 | 0.500 |
| AUTOBODY INCINERATORS | 0.050 | 0.013 | 0.0080 | 0.0080 | 0.050 | 0.016 | 30.0 | 0.800 |
| • SEC ZINC - DISTILLATION | 0.016 | 0.011 | 0.0073 | 0.0073 | 0.016 | 0.0073 | 9.2 | 1.000 |
| • SEC LEAD - BLAST FURN | 0.011 | 0.0079 | 0.0060 | 0.0060 | 0.011 | 0.0060 | 4.8 | 1.000 |
| • SEC ZINC - SWEAT | 0.0085 | 0.0058 | 0.0038 | 0.0038 | 0.0085 | 0.0038 | 4.7 | 1.000 |
| • SEC MAGNESIUM | 0.0029 | 0.0025 | 0.0016 | 0.0016 | 0.0029 | 0.0016 | 1.3 | 1.000 |

RANKED DATA FOR $SO_x$

A

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 3.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST. | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW. | 0.85 | | 2443.000 | | | | | | | | |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST. | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW. | 0.83 | | 1798.000 | | | | | | | | |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST. | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW. | 0.85 | | 1320.000 | | | | | | | | |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST. | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW. | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONTEN | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | |
| 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SEC LEAD - BLAST FURN | | | | | | | | | |
| 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | |
| 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| • BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| • PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.[illegible] | 25.3 | 10200. | 0.500 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| • IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| • ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| • GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| • MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.904 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.93 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | -0.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |

B

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P O | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ENC | EMISSION RATES EUNCONT | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | -0.000 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |

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SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 5B=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| MUNICIPAL INCINERATORS | | | | | | | | | | | |
| | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 9260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.35 | | 28.600 | | | | | | | | |
| SEC LEAD - BLAST FURN | | | | | | | | | | | |
| | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| • BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| • PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| • IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| • ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| • MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| • GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| • PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| PET REFNRY PROC GAS COMB | 0.0012 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | -0.000 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | TU 1985 | TA 1975 | TE 1985 | TVE 1985 | TS 1985 | TN 1985 | TS-TN 1985 | 1 - EN/ES |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |

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SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=A17 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |

# SULFUR OXIDE

## SUMMARY OF INPUT/OUTPUT VARIABLES FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0. | 0. | 0. | 0. | 0. | 0.0 | -0.000 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| OIL AND NAT. GAS, PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |

$E_S$ (Existing)

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| SEC LEAD REVERTB FURN | | | | | | | | | | | |
| | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| EXPLOSIVES - LOW | | | | | | | | | | | |
| | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| SEC LEAD - BLAST FURN | | | | | | | | | | | |
| | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| REFINERY FUEL GAS - SULFUR RECOVERY | | | | | | | | | | | |
| | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | | | | | | | | | | | |
| | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 58-AI7 AS | 35.000 | 9.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.53 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0. | 0. | 0. | 0. | 0. | 0.0 | -0.000 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

$E_S$ (New)

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONTEU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0. | 0. | 0. | 0. | 0. | 0.0 | -0.000 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| BLR 10-250 E6 BTU/HR | 65[illegible]3. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |

$\underline{E_U}$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SEC LEAD REVERTB FURN | | | | | | | | | | | |
| | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| REFINERY FUEL GAS - SULFUR RECOVERY | | | | | | | | | | | |
| | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| EXPLOSIVES - LOW | | | | | | | | | | | |
| | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 5B=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| SEC LEAD - BLAST FURN | | | | | | | | | | | |
| | 0.68 | LP/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | | | | | | | | | | | |
| | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| EXPLOSIVES - HIGH | | | | | | | | | | | |
| | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| PET RFNRY PROC GAS COMB | 0.0012 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.000 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

$\underline{1 - E_N/E_S}$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| LIME PROCESSING | | | | | | | | | | | |
| | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| REFINERY FUEL GAS - SULFUR RECOVERY | | | | | | | | | | | |
| | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| WOOD PULPING KRAFT | | | | | | | | | | | |
| | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | | | | | | | | | | | |
| | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 58=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| GAS TURBINE ENGINES GAS PIPELINE | | | | | | | | | | | |
| | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PET RFNRY PROC GAS COMB EXIST. | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW. | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8593. | 16830. | 8518. | 8310000. | 0.873 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | TU 1985 | TA 1975 | TE 1985 | TUE 1985 | TS 1985 | TN 1985 | TS-TN 1985 | 1 - EN/ES |
| PET RFNRY PROC GAS COMB | 0.0012 | 0. | 0. | 0. | 0. | 0. | 0.0 | -0.000 |

$\underline{P_B}$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=A17 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| MINERAL WOOL | 0.92 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| * HYDROFLUORIC ACID | 0.67 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0. | 0. | 0. | 0. | 0. | 0.0 | -0.000 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * IRON AND STEEL SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |

$P_C$ (Compound)

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BLR 10-250 E6 BTU/HR EXIST. | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW. | 0.32 | | 1.530 | | | | | | | | |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| EXPLOSIVES - HIGH | 53.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| • PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| • PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.000 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| • BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2660. | 5901. | 3323. | 2570000. | 0.831 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |

## $P_C$ (Simple)

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.034 | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |

K

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST* | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW* | 0.90 | | 21.000 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST* | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW* | 0.85 | | 28.600 | | | | | | | | |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST* | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW* | 0.85 | | 2443.000 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST* | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW* | 0.85 | | 1320.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST* | 0.84 | SB*AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW* | 0.84 | | 4.000 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST* | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW* | 0.83 | | 1798.000 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST* | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW* | 0.59 | | 0.660 | | | | | | | | |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW* | 0.58 | | 0.970 | | | | | | | | |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST* | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW* | 0.47 | | 0.025 | | | | | | | | |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST* | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW* | 0.32 | | 1.530 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1965 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * HYDROFLUORIC ACID | 0.49 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.000 |
| * PET RFF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 63.3 | 50.7 | 17500. | 0.479 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | | | EMISSIONS 1000 TONS/YEAR | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |

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SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| FET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| REFINERY FUEL GAS - SULFUR RECOVERY | | | | | | | | | | | |
| | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DJALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.660 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST. | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW. | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | -0.000 |

$T_A$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 58=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.05 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONTEU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MINERAL WOOL | | | | | | | | | | | |
| | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |

# SULFUR OXIDE

## SUMMARY OF OUTPUT VARIABLES FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133• | 45•2 | 31•7 | 61•9 | 68•3 | 50•7 | 17500• | 0•479 |
| * MUNICIPAL INCINERATORS | 51•8 | 35•5 | 21•6 | 21•6 | 51•8 | 21•6 | 30100• | 1•000 |
| COAL CLEANING | 67•8 | 30•2 | 15•1 | 26•3 | 35•6 | 25•3 | 10200• | 0•500 |
| OIL AND NAT• GAS PROD-SULFUR RECOVERY | 50•9 | 25•8 | 16•8 | 21•9 | 39•0 | 29•1 | 9800• | 0•444 |
| EXPLOSIVES - HIGH | 58•0 | 23•6 | 13•0 | 13•0 | 58•0 | 16•6 | 41400• | 0•920 |
| LIME PROCESSING | 27•2 | 16•7 | 8•4 | 8•4 | 27•2 | 17•8 | 9400• | 0•500 |
| BRICK & RELATED CLAY PRODUCTS | 19•5 | 15•4 | 10•3 | 10•3 | 19•5 | 14•0 | 5500• | 0•600 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41•9 | 14•7 | 9•0 | 9•0 | 41•9 | 9•0 | 32800• | 1•000 |
| EXPLOSIVES - LOW | 34•4 | 14•0 | 7•7 | 7•7 | 34•4 | 9•8 | 24500• | 0•920 |
| GAS TURBINE ENGINES GAS PIPELINE | 24•1 | 9•8 | 7•9 | 7•9 | 24•1 | 21•3 | 2700• | 0•169 |
| ASPHALT BATCHING | 14•3 | 9•6 | 8•8 | 8•8 | 13•9 | 11•6 | 2300• | 0•451 |
| FIBERGLASS MANUF - TEXTILE | 9•3 | 2•9 | 1•1 | 1•1 | 9•3 | 1•1 | 8100• | 0•998 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762• | 2•7 | 2•7 | 10•1 | 472• | 353• | 118000• | 0•253 |
| FIBERGLASS MANUF - WOOL | 3•7 | 2•5 | 0•93 | 0•93 | 3•7 | 0•94 | 2700• | 0•994 |
| SEC LEAD - BLAST FURN | 3•3 | 2•3 | 1•8 | 1•8 | 3•2 | 1•8 | 1400• | 0•990 |
| * ORCHARD HEATERS | 1•4 | 1•1 | 0•74 | 0•74 | 1•4 | 0•74 | 670• | 1•000 |
| * GLASS - OPAL | 0•99 | 0•77 | 0•52 | 0•52 | 0•99 | 0•52 | 470• | 1•000 |
| * HYDROFLUORIC ACID | 0•69 | 0•46 | 0•25 | 0•25 | 0•69 | 0•25 | 430• | 1•000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37•2 | 0•21 | 0•21 | 0•21 | 37•2 | 7•6 | 29600• | 0•800 |
| * MINERAL WOOL | 0•083 | 0•069 | 0•049 | 0•049 | 0•083 | 0•049 | 30•0 | 1•000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | -0.000 |

$T_E$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| GLASS - SODA LIME | | | | | | | | | | | |
| | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.660 | | | | | | | | |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - OIL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MINERAL WOOL | | | | | | | | | | | |
| | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET REFRY PROC GAS COMB | | | | | | | | | | | |
| EXIST* | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW* | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR TU 1985 | TA 1975 | TE 1985 | TUE 1985 | TS 1985 | TN 1985 | TONS/YEAR TS-TN 1985 | 1 - EN/ES |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | -0.000 |

$T_{UE}$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | 58.AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| REFINERY FUEL GAS - SULFUR RECOVERY | | | | | | | | | | | |
| | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |

# SULFUR OXIDE

## SUMMARY OF INPUT/OUTPUT VARIABLES FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.660 | | | | | | | | |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 49.1 | 67.1 | 37.5 | 29500. | 0.990 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | -0.000 |

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SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB*AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| PET REF - FCCU | | | | | | | | | | | |
| | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| MIXED FUEL BOILERS - COAL & REFUSE | | | | | | | | | | | |
| | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | | | | | | | | | | | |
| | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| WOOD PULPING NSSC | | | | | | | | | | | |
| | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| PRIMARY ALUMINUM SMELTERS | | | | | | | | | | | |
| | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| WOOD PULPING SULFITE | | | | | | | | | | | |
| | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| IRON AND STEEL - SINTERING | | | | | | | | | | | |
| | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | | | | | | | | | | | |
| | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST= | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW= | 0.59 | | 0.660 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077. | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST= | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW= | 0.47 | | 0.025 | | | | | | | | |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST. | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW. | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | % - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | 0.000 |

$\underline{T_S - T_N}$

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST. | 0.84 | SB.AI7 AS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW. | 0.84 | | 4.000 | | | | | | | | |
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.660 | | | | | | | | |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | 0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR TU 1985 | TA 1975 | TE 1985 | TUE 1985 | TS 1985 | TN 1985 | TONS/YEAR TS-TN 1985 | 1 - EN/ES |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.5 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

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SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.58 | LB/E6 BTU | 1.800 | 0.123 | 1.990 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| NEW= | 0.58 | | 0.970 | | | | | | | | |
| BLR 10-250 E6 BTU/HR | | | | | | | | | | | |
| EXIST= | 0.32 | LB/E6 BTU | 1.790 | 0.259 | 1.830 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| NEW= | 0.32 | | 1.530 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.771 | 0.207 | 0.771 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| COPPER SMELTERS | | | | | | | | | | | |
| EXIST= | 0.85 | LB/TON | 2503.000 | 25.000 | 5000.000 | 0.036S | 0.030C | E6 TONS | 2.4 | 0.86 | 0.83 |
| NEW= | 0.85 | | 2443.000 | | | | | | | | |
| CEMENT PLANTS | | | | | | | | | | | |
| EXIST= | 0.90 | LB/TON | 21.700 | 8.840 | 21.700 | 0.025S | 0.030C | E6 TONS | 103. | 25.8 | 35.4 |
| NEW= | 0.90 | | 21.000 | | | | | | | | |
| PRIMARY ZINC SMELTERS | | | | | | | | | | | |
| EXIST= | 0.83 | LB/TON | 2200.000 | 33.000 | 2200.000 | 0.036S | 0.035C | E6 TONS | 1.3 | 0.47 | 0.53 |
| NEW= | 0.83 | | 1798.000 | | | | | | | | |
| SULFURIC ACID PLANTS | | | | | | | | | | | |
| EXIST= | 0.84 | SB=AI7 BS | 35.000 | 3.000 | 55.000 | 0.045S | 0.053C | E6 TONS | 49.0 | 22.1 | 33.1 |
| NEW= | 0.84 | | 4.000 | | | | | | | | |
| MIXED FUEL BOILERS - COAL & REFUSE | 0.58 | LB/TON | 60.000 | 44.800 | 224.000 | 0.000S | 17.290S | E6 TONS | 0.16 | 0.0 | 27.0 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.107 | 0.000 | 0.107 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PRIMARY LEAD SMELTERS | | | | | | | | | | | |
| EXIST= | 0.99 | LB/TON | 1320.000 | 19.800 | 1320.000 | 0.036S | 0.000S | E6 TONS | 0.77 | 0.28 | 0.0 |
| NEW= | 0.85 | | 1320.000 | | | | | | | | |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 0.22 | LB/TON | 16.600 | 9.480 | 16.600 | 0.020S | 0.270S | E6 TONS | 54.1 | 10.8 | 146. |
| WOOD PULPING NSSC | 0.98 | LB/TON | 143.000 | 20.000 | 143.000 | 0.031S | 0.012C | E6 TONS | 4.2 | 1.3 | 0.53 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.700 | 5.630 | 5.700 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PET REF - FCCU | 0.85 | LB/TON | 0.493 | 0.000 | 0.493 | 0.031S | 0.042C | E6 TONS | 1506. | 467. | 771. |
| WOOD PULPING SULFITE | 0.98 | LB/TON | 126.000 | 20.000 | 126.000 | 0.031S | 0.012C | E6 TONS | 2.4 | 0.74 | 0.30 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 16.800 | 14.300 | 16.800 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PRIMARY ALUMINUM SMELTERS | 0.92 | LB/TON | 56.100 | 0.000 | 60.000 | 0.035S | 0.075C | E6 TONS | 6.0 | 2.1 | 6.4 |
| IRON AND STEEL - SINTERING | 0.90 | LB/TON | 3.000 | 0.000 | 3.000 | 0.028S | 0.029S | E6 TONS | 69.6 | 19.5 | 20.2 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| REFINERY FUEL GAS - SULFUR RECOVERY | 0.66 | LB/TON | 38.400 | 20.000 | 75.000 | 0.030S | 0.042C | E6 TONS | 3.6 | 1.1 | 1.8 |
| WOOD PULPING KRAFT | 0.98 | LB/TON | 3.060 | 1.600 | 5.000 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| GLASS - SODA LIME | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 34.4 | 11.4 | 9.6 |
| SEC LEAD REVERTB FURN | 0.68 | LB/TON | 202.000 | 2.120 | 212.000 | 0.024S | 0.032C | E6 TONS | 0.71 | 0.17 | 0.26 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 0.50 | LB/TON | 36.000 | 20.000 | 47.000 | 0.035S | 0.042C | E6 TONS | 2.9 | 1.0 | 1.5 |
| COAL CLEANING | | | | | | | | | | | |
| EXIST. | 0.59 | LB/TON | 0.770 | 0.330 | 1.340 | 0.050S | 0.029S | E6 TONS | 133. | 66.5 | 38.6 |
| NEW. | 0.59 | | 0.660 | | | | | | | | |
| MUNICIPAL INCINERATORS | 0.56 | LB/TON | 3.900 | 0.000 | 3.900 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| GAS TURBINE ENGINES GAS PIPELINE | 0.85 | LB/TON | 5.270 | 4.380 | 5.270 | 0.020S | 0.145S | E6 TONS | 4.4 | 0.88 | 6.4 |
| LIME PROCESSING | 0.90 | LB/TON | 1.420 | 0.710 | 1.420 | 0.050S | 0.050C | E6 TONS | 26.1 | 13.1 | 16.4 |
| EXPLOSIVES - HIGH | 0.83 | LB/TON | 31.000 | 2.480 | 31.000 | 0.045S | 0.094C | E6 TONS | 1.8 | 0.83 | 2.7 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 1.077 | 0.431 | 1.077 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ASPHALT BATCHING | | | | | | | | | | | |
| EXIST. | 0.47 | LB/TON | 0.027 | 0.014 | 0.027 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| NEW. | 0.47 | | 0.025 | | | | | | | | |
| EXPLOSIVES - LOW | 0.83 | LB/TON | 65.000 | 5.200 | 65.000 | 0.045S | 0.094C | E6 TONS | 0.52 | 0.23 | 0.76 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.380 | 0.000 | 2.380 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MIXED FUEL BOILERS - OIL & REFUSE | 0.58 | LB/TON | 20.500 | 4.100 | 20.500 | 0.000S | 17.290S | E6 TONS | 0.036 | 0.0 | 6.2 |
| SEC LEAD - BLAST FURN | 0.68 | LB/TON | 46.600 | 0.480 | 48.000 | 0.024S | 0.032C | E6 TONS | 0.15 | 0.036 | 0.055 |
| FIBERGLASS MANUF - TEXTILE | 0.70 | LB/TON | 16.200 | 0.040 | 16.200 | 0.063S | 0.122C | E6 TONS | 0.52 | 0.32 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 6.510 | 0.040 | 6.510 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| ORCHARD HEATERS | 1.00 | LB/TON | 0.037 | 0.000 | 0.037 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| GLASS - OPAL | 0.80 | LB/TON | 4.240 | 0.000 | 4.240 | 0.033S | 0.028S | E6 TONS | 0.46 | 0.15 | 0.13 |

SULFUR OXIDE

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HYDROFLUORIC ACID | 0.98 | LB/TON | 2.100 | 0.000 | 2.100 | 0.045S | 0.049S | E6 TONS | 0.45 | 0.20 | 0.22 |
| MINERAL WOOL | 0.82 | LB/TON | 0.020 | 0.000 | 0.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PET RFNRY PROC GAS COMB | | | | | | | | | | | |
| EXIST= | 0.85 | LB/E6 CFT | 2490.000 | 28.600 | 8260.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.071 | -0.12 |
| NEW= | 0.85 | | 28.600 | | | | | | | | |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| BLR >250 E6 BTU/HR | 27612. | 14622. | 7311. | 8083. | 16830. | 8518. | 8310000. | 0.873 |
| BLR 10-250 E6 BTU/HR | 6573. | 5595. | 2797. | 2860. | 5901. | 3323. | 2570000. | 0.831 |
| BOILERS .3-10 MM BTU/HR | 3887. | 2551. | 1607. | 1607. | 3887. | 2219. | 1660000. | 0.732 |
| COPPER SMELTERS | 6854. | 2553. | 1634. | 3264. | 3388. | 1652. | 1730000. | 0.990 |
| CEMENT PLANTS | 1352. | 1006. | 754. | 754. | 1332. | 998. | 334000. | 0.579 |
| PRIMARY ZINC SMELTERS | 1674. | 1187. | 760. | 760. | 1507. | 773. | 733000. | 0.982 |
| SULFURIC ACID PLANTS | 1897. | 720. | 396. | 623. | 489. | 466. | 23100. | 0.250 |
| MIXED FUEL BOILERS - COAL & REFUSE | 1762. | 2.7 | 2.7 | 10.1 | 472. | 353. | 118000. | 0.253 |
| * BOILERS <.3 MM BTU/HR | 525. | 394. | 316. | 316. | 525. | 316. | 209000. | 1.000 |
| PRIMARY LEAD SMELTERS | 458. | 503. | 276. | 276. | 458. | 279. | 178000. | 0.985 |
| GAS TURBINE ENGINES ELECTRIC UTILITIES | 366. | 98.8 | 79.0 | 79.0 | 366. | 243. | 122000. | 0.429 |
| WOOD PULPING NSSC | 330. | 293. | 202. | 202. | 330. | 220. | 110000. | 0.860 |
| COKE OVENS - BY PRODUCT | 220. | 200. | 144. | 144. | 220. | 219. | 930. | 0.012 |
| * PET REF - FCCU | 477. | 316. | 218. | 218. | 477. | 218. | 259000. | 1.000 |
| WOOD PULPING SULFITE | 167. | 148. | 102. | 102. | 167. | 113. | 54400. | 0.841 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 112. | 87.5 | 70.0 | 70.0 | 112. | 106. | 6200. | 0.149 |
| * PRIMARY ALUMINUM SMELTERS | 341. | 155. | 101. | 108. | 319. | 101. | 218000. | 1.000 |
| * IRON AND STEEL - SINTERING | 121. | 94.0 | 67.7 | 67.7 | 121. | 67.7 | 53500. | 1.000 |
| REFINERY FUEL GAS - SULFUR RECOVERY | 133. | 45.2 | 31.7 | 61.9 | 68.3 | 50.7 | 17500. | 0.479 |
| WOOD PULPING KRAFT | 93.9 | 51.0 | 35.2 | 57.5 | 57.4 | 46.8 | 10600. | 0.477 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * GLASS - SODA LIME | 74.7 | 58.4 | 39.1 | 39.1 | 74.7 | 39.1 | 35600. | 1.000 |
| SEC LEAD REVERTB FURN | 70.4 | 49.0 | 37.2 | 39.1 | 67.1 | 37.5 | 29500. | 0.990 |
| OIL AND NAT. GAS PROD-SULFUR RECOVERY | 50.9 | 25.8 | 16.8 | 21.9 | 39.0 | 29.1 | 9800. | 0.444 |
| COAL CLEANING | 67.8 | 30.2 | 15.1 | 26.3 | 35.6 | 25.3 | 10200. | 0.500 |
| * MUNICIPAL INCINERATORS | 51.8 | 35.5 | 21.6 | 21.6 | 51.8 | 21.6 | 30100. | 1.000 |
| GAS TURBINE ENGINES GAS PIPELINE | 24.1 | 9.8 | 7.9 | 7.9 | 24.1 | 21.3 | 2700. | 0.169 |
| LIME PROCESSING | 27.2 | 16.7 | 8.4 | 8.4 | 27.2 | 17.8 | 9400. | 0.500 |
| EXPLOSIVES - HIGH | 58.0 | 23.6 | 13.0 | 13.0 | 58.0 | 16.6 | 41400. | 0.920 |
| BRICK & RELATED CLAY PRODUCTS | 19.5 | 15.4 | 10.3 | 10.3 | 19.5 | 14.0 | 5500. | 0.600 |
| ASPHALT BATCHING | 14.3 | 9.6 | 8.8 | 8.8 | 13.9 | 11.6 | 2300. | 0.451 |
| EXPLOSIVES - LOW | 34.4 | 14.0 | 7.7 | 7.7 | 34.4 | 9.8 | 24500. | 0.920 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 41.9 | 14.7 | 9.0 | 9.0 | 41.9 | 9.0 | 32800. | 1.000 |
| MIXED FUEL BOILERS - OIL & REFUSE | 37.2 | 0.21 | 0.21 | 0.21 | 37.2 | 7.6 | 29600. | 0.800 |
| SEC LEAD - BLAST FURN | 3.3 | 2.3 | 1.8 | 1.8 | 3.2 | 1.8 | 1400. | 0.990 |
| FIBERGLASS MANUF - TEXTILE | 9.3 | 2.9 | 1.1 | 1.1 | 9.3 | 1.1 | 8100. | 0.998 |
| FIBERGLASS MANUF - WOOL | 3.7 | 2.5 | 0.93 | 0.93 | 3.7 | 0.94 | 2700. | 0.994 |
| * ORCHARD HEATERS | 1.4 | 1.1 | 0.74 | 0.74 | 1.4 | 0.74 | 670. | 1.000 |
| * GLASS - OPAL | 0.99 | 0.77 | 0.52 | 0.52 | 0.99 | 0.52 | 470. | 1.000 |
| * HYDROFLUORIC ACID | 0.69 | 0.46 | 0.25 | 0.25 | 0.69 | 0.25 | 430. | 1.000 |
| * MINERAL WOOL | 0.083 | 0.069 | 0.049 | 0.049 | 0.083 | 0.049 | 30.0 | 1.000 |

SULFUR OXIDE

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PET RFNRY PROC GAS COMB | 0.0012 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.0 | -0.000 |

RANKED DATA FOR HC

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/DARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW. | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETR. - TRANSFER - JETFUEL | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| LEAD ACID BATTERY PLANTS | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PETR. - TANKS - KER - BREATH | | | | | | | | | | | |
| | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETR. - TRANSFER - AVGAS | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.3 |
| WOOD PULPING KRAFT PROCESS | | | | | | | | | | | |
| | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATOR | | | | | | | | | | | |
| | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| INTERNAL COMBUSTION ENGS SPKIGN | | | | | | | | | | | |
| | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 23.7 | 5.7 | 25.0 |
| CORE OVENS | | | | | | | | | | | |
| | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

B

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETR. - TRANSFER - JETFUEL | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| LEAD ACID BATTERY PLANTS | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PETR. - TANKS - KER - BREATH | | | | | | | | | | | |
| | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| PETR. - TRANSFER - AVGAS | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATOR | | | | | | | | | | | |
| | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| WOOD PULPING KRAFT PROCESS | | | | | | | | | | | |
| | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETR. - TRANSFER - SP. NAP. | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| CORE OVENS | | | | | | | | | | | |
| | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| INTERNAL COMBUSTION ENGS SPKIGN | | | | | | | | | | | |
| | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.500 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| AUTOMOBILE ASSEMBLY | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| PAINT | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| BEER | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.390 |
| MINERAL WOOL | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| FORMALDEHYDE | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| VEGETABLE OIL PRODUCTION | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| ETHYLENE DICHLORIDE | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| SMOKED MEAT | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| ASPHALT BLOWING | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| DRY CLEANING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| CARBON BLACK - FURNACE PROCESS | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| VARNISH | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| SYNTHETIC FIBERS NYLON | 43.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| ETHYLENE OXIDE - AIR OXIDATION | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| TEXTILE - CARPET MFG | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| DEEP FAT FRYING | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| FIBERGLASS MANUF - WOOL | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| COFFEE ROASTING | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| WHISKEY | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| ACRYLONITRILE | 305• | 34•0 | 18•7 | 67•8 | 84•2 | 18•8 | 65400• | 0•998 |
| TEXTILE - TEXTURIZING | 2•2 | 0•34 | 0•20 | 1•00 | 0•43 | 0•26 | 170• | 0•750 |
| CHARCOAL | 225• | 148• | 81•4 | 81•4 | 225• | 82•8 | 142000• | 0•990 |
| TEXTILE - HEAT SETTING | 7•6 | 1•0 | 0•61 | 2•0 | 2•3 | 1•4 | 850• | 0•513 |
| POLYETHYLENE - LOW DENSITY | 246• | 9•0 | 8•4 | 50•1 | 41•3 | 10•4 | 30800• | 0•940 |
| SYNTHETIC RESINS ACRYLIC | 255• | 9•1 | 5•0 | 33•5 | 38•2 | 7•2 | 31000• | 0•933 |
| SYNTHETIC RESINS ALKYD | 0•36 | 0•31 | 0•17 | 0•17 | 0•36 | 0•17 | 180• | 0•990 |
| SYNTHETIC FIBERS ACETATE | 1•8 | 1•4 | 0•77 | 0•77 | 1•8 | 0•82 | 1000• | 0•950 |
| PRINTING INK | 34•6 | 8•5 | 4•7 | 11•7 | 13•9 | 7•0 | 6800• | 0•750 |
| POLYSTYRENE | 24•9 | 4•3 | 4•1 | 11•5 | 9•0 | 4•3 | 4600• | 0•971 |
| AUTOBODY INCINERATORS | 0•50 | 0•13 | 0•080 | 0•080 | 0•50 | 0•27 | 220• | 0•540 |
| MALEIC ANHYDRIDE BENZENE OXID• | 46•8 | 16•9 | 9•3 | 10•9 | 40•0 | 9•3 | 30600• | 0•999 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45•4 | 14•2 | 11•3 | 17•0 | 30•3 | 12•4 | 17800• | 0•942 |
| STYRENE - BUTADIENE RUBBER | 4•5 | 3•7 | 3•6 | 3•6 | 4•5 | 4•3 | 240• | 0•262 |
| PETRLM REFNRY PRS GAS CO | 4•8 | 3•2 | 2•2 | 2•2 | 4•8 | 2•2 | 2600• | 1•000 |
| SEC ZINC SWEAT | 0•33 | 0•23 | 0•15 | 0•15 | 0•33 | 0•15 | 180• | 0•999 |
| SYNTHETIC RESINS PHENOLIC | 6•5 | 2•5 | 2•4 | 3•1 | 5•0 | 2•4 | 2500• | 0•987 |
| GRAPHIC ARTS-GRAVURE | 175• | 108• | 59•2 | 59•2 | 175• | 59•3 | 116000• | 0•999 |
| PATHOLOGICAL INCINERATOR | 0•11 | 0•084 | 0•051 | 0•051 | 0•11 | 0•052 | 50•0 | 0•989 |
| GRAPHIC ARTS - LETTERPRESS | 108• | 66•0 | 36•3 | 36•3 | 108• | 37•0 | 70400• | 0•990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |

C

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG - GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW. | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW. | 1.00 | | 1.350 | | | | | | | | |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW. | 1.00 | | 1.300 | | | | | | | | |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.[illegible]0S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| • ASPHALT BATCHING | 87.1 | 38.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRO. - TANKS - DS - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| PRINTING INK | 34.[illegible] | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |

$\underline{E_N}$

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST* | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW* | 1.00 | | 0.650 | | | | | | | | |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST* | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW* | 1.00 | | 0.290 | | | | | | | | |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 57.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG JET FUEL WRKING EXIST. | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW. | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG CRD OIL WRKNG EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| PETRLM STRG GASOLINE WRKNG EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| COKE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| VARNISH | 43.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| CARBON BLACK - FURNACE PROCESS | 553. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.390 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |

$E_S$ (Existing)

HYDRØCARBØNS

SUMMARY ØF INPUT/ØUTPUT VARIABLES
FØR MØDEL IV

| SØURCE | K | EMISSIØN UNITS | EMISSIØN RATES ALLØWABLE E S | EMISSIØN RATES E N | EMISSIØN RATES UNCØNT E U | GRØWTH RATES DECIMAL/YR P B | GRØWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRØDUCTIØN A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING ØF MEAT | 0.62 | LB/TØN | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TØNS | 0.034 | 0.017 | 0.011 |
| GRAPHIC ARTS FLEXØGRAPHY | 0.80 | LB/TØN | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TØNS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECØRATING | 0.80 | LB/TØN | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TØNS | 0.046 | 0.021 | 0.029 |
| GRAPHIC ARTS - LITHØGRAPHY | 0.80 | LB/TØN | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TØNS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TØN | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TØNS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TØN | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TØNS | 0.11 | 0.049 | 0.069 |
| CARBØN BLACK - FURNACE PRØCESS | 0.77 | LB/TØN | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TØNS | 2.0 | 0.89 | 0.56 |
| CHARCØAL | 0.85 | LB/TØN | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TØNS | 0.79 | 0.36 | 0.42 |
| ETHYLENE ØXIDE - AIR ØXIDATIØN | 0.87 | LB/TØN | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TØNS | 1.7 | 0.76 | 1.8 |
| DRY CLEANING | 1.00 | LB/TØN | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TØNS | 2.4 | 1.2 | 0.46 |
| MALEIC ANHYDRIDE BENZENE ØXID. | 1.00 | LB/TØN | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TØNS | 0.23 | 0.10 | 0.31 |
| ACRYLØNITRILE | 0.90 | LB/TØN | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TØNS | 0.83 | 0.37 | 1.2 |
| AMMØNIA - METHANATØR PLANT | 0.83 | LB/TØN | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TØNS | 11.1 | 5.0 | 15.2 |
| AMMØNIA - REGENERATØR & CØ ABSØRBER | 0.83 | LB/TØN | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TØNS | 11.1 | 5.0 | 15.2 |
| PHTHALIC ANHYDRIDE - Ø-XYLENE | 0.78 | LB/TØN | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TØNS | 0.42 | 0.084 | 0.48 |
| INTERNAL CØMBUSTIØN ENGS SPKIGN | 0.58 | LB/TØN | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TØNS | 28.7 | 5.7 | 25.0 |
| PRINTING INK | 0.83 | LB/TØN | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TØNS | 0.43 | 0.19 | 0.27 |
| VEGETABLE ØIL PRØDUCTIØN | 0.92 | LB/TØN | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TØNS | 6.5 | 1.8 | 1.8 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TØN | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TØNS | 0.58 | 0.26 | 1.9 |
| VARNISH | 0.85 | LB/TØN | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TØNS | 1.3 | 0.86 | 0.38 |
| PETRLM REFNRY PRS GAS CØ | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085, |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | .0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW. | 0.85 | | 0.054 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETRLM STRG GASOLINE WRKNG EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF HEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T S - T N 1985 | 1 - E N / E S |
|---|---|---|---|---|---|---|---|---|
| PETRLM REFNRY P/S GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.371 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| PETRO. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |

$E_S$ (New)

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES ALLOWABLE EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |

$\underline{E_U}$

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES ALLOWABLE E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| COKE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.65 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW. | 0.85 | | 0.054 | | | | | | | | |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - CRUDE | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| BOILERS 10-250 MM BTU/HR | | | | | | | | | | | |
| | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS .3-10 MM BTU/HR | | | | | | | | | | | |
| | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS >250 MM BTU/HR | | | | | | | | | | | |
| | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| LEAD ACID BATTERY PLANTS | | | | | | | | | | | |
| | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PLYWOOD-VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 3.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.[illegible] | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1301. | 4025. | 1460. | 2560000. | 0.877 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.563 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |

HYDRØCARBØNS

SUMMARY ØF ØUTPUT VARIABLES
FØR MØDEL IV

| SØURCE | EMISSIØNS 1000 TØNS/YEAR | | | | | | TØNS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG JET FUEL BRTHNG | 213• | 62•0 | 42•8 | 59•9 | 114• | 114• | 0•0 | 0•000 |
| CØFFEE RØASTING | 0•72 | 0•72 | 0•43 | 0•43 | 0•72 | 0•44 | 280• | 0•995 |
| AUTØBØDY INCINERATØRS | 0•50 | 0•13 | 0•080 | 0•080 | 0•50 | 0•27 | 220• | 0•540 |
| TEXTILE - CARPET MFG | 1•1 | 0•57 | 0•33 | 0•37 | 0•95 | 0•37 | 580• | 0•944 |
| PØLYPRØPYLENE | 1•8 | 0•37 | 0•36 | 0•42 | 1•5 | 0•36 | 1100• | 0•994 |
| PETRØ• - TANKS - DØ - BREATH | 261• | 139• | 95•6 | 132• | 190• | 158• | 31700• | 0•336 |
| PETR• - TANKS - KER - BREATH | 22•5 | 16•5 | 11•4 | 15•5 | 16•5 | 14•8 | 1600• | 0•322 |
| PET REF - MISC PT SØURCE | 1859• | 1230• | 848• | 848• | 1859• | 1354• | 505000• | 0•500 |
| PETR• - REFUELING | 888• | 632• | 436• | 436• | 888• | 504• | 383000• | 0•849 |
| PETR - SERVICE STATIØNS | 666• | 287• | 198• | 327• | 403• | 229• | 174000• | 0•852 |
| SMØKED MEAT | 0•60 | 0•51 | 0•31 | 0•31 | 0•60 | 0•43 | 170• | 0•571 |
| • ASPHALT BATCHING | 87•1 | 58•1 | 53•4 | 53•4 | 87•1 | 53•4 | 33600• | 1•000 |
| PET REF - VACUUM DIST• | 154• | 102• | 70•4 | 70•4 | 154• | 70•4 | 83700• | 0•999 |
| PETRLM STRG AV GS WRKNG | 8•1 | 2•6 | 1•8 | 2•3 | 4•5 | 4•5 | 0•0 | 0•000 |
| PETR• - TRANSFER - GAS | 108• | 47•1 | 27•4 | 44•8 | 66•1 | 33•8 | 32300• | 0•837 |
| PETR• - TRANSFER - SP• NAP• | 0•94 | 0•68 | 0•39 | 0•51 | 0•73 | 0•60 | 120• | 0•378 |
| PETRLM STRG GASØLINE WRKNG | 205• | 89•0 | 61•4 | 100• | 72•3 | 72•3 | 0•0 | 0•000 |
| PETR• - TRANSFER - AVGAS | 4•3 | 1•4 | 0•79 | 1•0 | 3•3 | 2•4 | 990• | 0•389 |
| PETRLM STRG JET FUEL WRKING | 33•4 | 10•6 | 7•3 | 9•4 | 18•5 | 18•5 | 0•0 | 0•000 |
| PETR• - TRANSFER - JETFUEL | 17•7 | 5•6 | 3•3 | 4•2 | 13•7 | 9•5 | 4100• | 0•400 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |

$\underline{1 - E_N/E_S}$

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR TU 1985 | TA 1975 | TE 1985 | TUE 1985 | TS 1985 | TN 1985 | TONS/YEAR TS-TN 1985 |
|---|---|---|---|---|---|---|---|
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. |
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR |
|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | .50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 930. | 0.389 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14005. | 19836. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW. | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW. | 1.00 | | 1.300 | | | | | | | | |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| COKE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| PAINT | | | | | | | | |
| VARNISH | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| FIBERGLASS MANUF - WOOL | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| DRY CLEANING | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| PLYWOOD-VENEER | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| DIRECT FIRING OF MEAT | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| * BOILERS >250 MM BTU/HR | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| * BOILERS 10-250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| GRAPHIC ARTS - LETTERPRESS | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| GRAPHIC ARTS - LITHOGRAPHY | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - METAL DECORATING | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| ACRYLONITRILE | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| FORMALDEHYDE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| AMMONIA - REGENERATOR & CO ABSORBER | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| ETHYLENE DICHLORIDE | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| ETHYLENE OXIDE - AIR OXIDATION | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| CARBON BLACK - FURNACE PROCESS | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| PRINTING INK | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| AMMONIA - METHANATOR PLANT | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| CHARCOAL | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 530. | 0.944 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 250. | 0.995 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| * ASPHALT BATCHING | | | | | | | | |
| POLYETHYLENE - LOW DENSITY | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| POLYSTYRENE | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| SYNTHETIC RESINS ABS-SAN | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| SYNTHETIC RESINS PHENOLIC | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| POLYPROPYLENE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| STYRENE - BUTADIENE RUBBER | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| POLYVINYL CHLORIDE | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| POLYETHYLENE - HIGH DENSITY | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |

$P_C$ (Compound)

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 |
|---|---|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 |
| NEW= | 0.85 | | 0.055 | | | | | | | |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 |
| NEW= | 1.00 | | 1.350 | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 |
| NEW= | 0.85 | | 0.054 | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 |
| NEW= | 1.00 | | 0.650 | | | | | | | |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| FLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |

$P_C$ (Simple)

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| COKE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |

K

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRY CLEANING | | | | | | | | | | | |
| | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| FETRO. - TANKS - DO - BREATH | | | | | | | | | | | |
| | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| POLYETHYLENE - HIGH DENSITY | | | | | | | | | | | |
| | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| FETR. - TANKS - KER - BREATH | | | | | | | | | | | |
| | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW. | 1.00 | | 1.350 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW. | 1.00 | | 1.560 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW. | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW. | 1.00 | | 1.300 | | | | | | | | |
| ORCHARD HEATERS | | | | | | | | | | | |
| | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| MALEIC ANHYDRIDE BENZENE OXID. | | | | | | | | | | | |
| | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| WOOD PULPING KRAFT PROCESS | | | | | | | | | | | |
| | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PLYWOOD-VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| WHISKEY | | | | | | | | | | | |
| | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| CORE OVENS | | | | | | | | | | | |
| | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| COKE OVENS - BY PRODUCT | | | | | | | | | | | |
| | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| SYNTHETIC FIBERS ACETATE | | | | | | | | | | | |
| | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| VEGETABLE OIL PRODUCTION | | | | | | | | | | | |
| | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| AUTOMOBILE ASSEMBLY | | | | | | | | | | | |
| | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE $E_S$ | $E_N$ | UNCONT $E_U$ | GROWTH RATES DECIMAL/YR $P_B$ | $P_C$ | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE I | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG SPC NAP WRKNG EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.7.0 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE $E_S$ | $E_N$ | UNCONT $E_U$ | GROWTH RATES DECIMAL/YR $P_B$ | $P_C$ | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 449. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST* | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW* | 1.00 | | 0.650 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST* | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW* | 0.85 | | 0.012 | | | | | | | | |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST* | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW* | 1.00 | | 1.350 | | | | | | | | |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FORMALDEHYDE | | | | | | | | | | | |
| | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| BOILERS <.3 MM BTU/HR | | | | | | | | | | | |
| | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| WOOD PULPING KRAFT PROCESS | | | | | | | | | | | |
| | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| ASPHALT BATCHING | | | | | | | | | | | |
| | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| DIRECT FIRING OF MEAT | | | | | | | | | | | |
| | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| PAINT | | | | | | | | | | | |
| | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PETR. - TRANSFER - CRUDE | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.020S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| BEER | | | | | | | | | | | |
| | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| INDUSTRIAL COMMERCIAL INCINERATORS | | | | | | | | | | | |
| | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| VARNISH | | | | | | | | | | | |
| | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| MALEIC ANHYDRIDE BENZENE OXID. | | | | | | | | | | | |
| | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PHTHALIC ANHYDRIDE - O-XYLENE | | | | | | | | | | | |
| | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| POLYVINYL CHLORIDE | | | | | | | | | | | |
| | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| MUNICIPAL INCINERATOR | | | | | | | | | | | |
| | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PRINTING INK | | | | | | | | | | | |
| | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW. | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW. | 1.00 | | 1.300 | | | | | | | | |
| POLYSTYRENE | | | | | | | | | | | |
| | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| PETR. - TANKS - KER - BREATH | | | | | | | | | | | |
| | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PETR. - TRANSFER - JETFUEL | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EN | UNCONT EU | GROWTH RATES DECIMAL/YR PB | PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.110 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 585. | 585. | 842. | 842. | 0.0 | -0.000 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 36.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |

HYDRØCARBØNS

SUMMARY ØF ØUTPUT VARIABLES
FØR MØDEL IV

| SØURCE | EMISSIØNS 1000 TØNS/YEAR | | | | | | TØNS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SYNTHETIC FIBERS NYLØN | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PLYWØØD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| MINERAL WØØL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| SYNTHETIC RESINS PHENØLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| PETRLM REFNRY PRS GAS CØ | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| ASPHALT BLØWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| FIBERGLASS MANUF - WØØL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PØLYPRØPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| • BRICK & RELATED CLAY PRØDUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.97 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| PETRO. - TANKS - DR - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| POLYETHYLENE - LOW DENSITY | 0.38 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.130 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 26.5 | 65.7 | 54.4 | 11200. | 0.324 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.938 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.973 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.939 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE F S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW. | 1.00 | | 1.560 | | | | | | | | |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHARCOAL | | | | | | | | | | | |
| CORE OVENS | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS >250 MM BTU/HR | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| FET REF - VACUUM DIST. | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| BOILERS 10-250 MM BTU/HR | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| FETRLM STRG GASOLINE WRKNG | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |
| GRAPHIC ARTS-GRAVURE | | | | | | | | | | | |
| BOILERS <.3 MM BTU/HR | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| WOOD PULPING KRAFT PROCESS | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| ASPHALT BATCHING | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| FETRLM STRG JET FUEL BRTHNG | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| EXIST. | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW. | 1.00 | | 0.650 | | | | | | | | |
| AUTOMOBILE ASSEMBLY | | | | | | | | | | | |
| GRAPHIC ARTS - LETTERPRESS | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| DIRECT FIRING OF MEAT | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| PETR. - TRANSFER - CRUDE | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| FETRLM STRG AV GS BRTHNG | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| EXIST. | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW. | 1.00 | | 1.350 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.7 | 9.6 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 34.8 | 3200. | 0.096 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.939 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| PETRLM STRG AV GS WRKNG | 3.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.860 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW. | 1.00 | | 1.560 | | | | | | | | |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.026S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P U | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| COKE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW. | 1.00 | | 1.350 | | | | | | | | |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.065 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW. | 1.00 | | 1.300 | | | | | | | | |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.830 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW. | 0.85 | | 0.054 | | | | | | | | |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.023S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.033C | E6 TONS | 0.20 | 0.069 | 0.091 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| COKE OVENS - BY PRODUCT | 225. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| * BOILERS >250 MM. BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| GRAPHIC ARTS-GRAVURE | 175. | 109. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.830 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW. | 1.00 | | 1.560 | | | | | | | | |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW. | 1.00 | | 0.290 | | | | | | | | |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW. | 0.85 | | 0.048 | | | | | | | | |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST. | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW. | 1.00 | | 0.650 | | | | | | | | |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST. | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW. | 0.85 | | 0.012 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P G | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.36 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.07[illegible] | E6 TONS | 1.1 | 0.055 | 1.1 |
| PETRLM REFNRY PRS GAS CO | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| PETRLM STRG AV GS WRKNG EXIST. | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW. | 0.85 | | 0.055 | | | | | | | | |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500. | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETRLM STRG SPC NAP WRKNG EXIST. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW. | 0.85 | | 0.056 | | | | | | | | |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE ES | EMISSION RATES UNCONT EN | EMISSION RATES UNCONT EU | GROWTH RATES DECIMAL/YR PB | GROWTH RATES DECIMAL/YR PC | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.260S | E6 PU | 0.29 | 0.11 | 0.82 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| * BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| * BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| * BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 62.1 | 144. | 107. | 37400. | 0.593 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| DIRECT FIRING OF HEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| • INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| • MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PLYWOOD-VENEER DEEP FAT FRYING | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| POLYSTYRENE | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| MINERAL WOOL | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| SYNTHETIC RESINS PHENOLIC | 8.4 | 7.0 | 4.3 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| PETRLM REFNRY PRS GAS CO | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.387 |
| PETRLM STRG AV GS WRKNG | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| STYRENE - BUTADIENE RUBBER | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| ASPHALT BLOWING | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| SYNTHETIC RESINS UREA-MELANINE | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| PETR. - TRANSFER - AVGAS | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| WHISKEY | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| TEXTILE - HEAT SETTING | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| SYNTHETIC RESINS ABS-SAN | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| FIBERGLASS MANUF - WOOL | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC FIBERS ACETATE | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| POLYPROPYLENE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| * BRICK & RELATED CLAY PRODUCTS | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| PETRLM STRG SPC NAP WRKNG | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| TEXTILE - CARPET MFG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

$\underline{T_S - T_N}$

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| ORCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.033S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| SYNTHETIC FIBERS NYLON | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| PLYWOOD-VENEER | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| DEEP FAT FRYING | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| POLYSTYRENE | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| PETRLM REFNRY PRS GAS C9 | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| SYNTHETIC RESINS PHENOLIC | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| ASPHALT BLOWING | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| MINERAL WOOL | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| SYNTHETIC RESINS UREA-MELANINE | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| WHISKEY | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| FIBERGLASS MANUF - WOOL | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SYNTHETIC RESINS ABS-SAN | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC FIBERS ACETATE | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| PETR. - TRANSFER - AVGAS | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| TEXTILE - HEAT SETTING | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| BRICK & RELATED CLAY PRODUCTS | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| STYRENE - BUTADIENE RUBBER | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| PETR. - TRANSFER - SP. NAP. | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| • INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 888. | 504. | 383000. | 0.849 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| • ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |
| * BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| * ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| PETR. - TRANSFER - GAS | 105. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1935 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| POLYETHYLENE - HIGH DENSITY | 233. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| PLYWOOD-VENEER | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| WOOD PULPING KRAFT PROCESS | 89.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR $T_U$ 1985 | $T_A$ 1975 | $T_E$ 1985 | $T_{UE}$ 1985 | $T_S$ 1985 | $T_N$ 1985 | TONS/YEAR $T_S - T_N$ 1985 | $1 - E_N/E_S$ |
|---|---|---|---|---|---|---|---|---|
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| * BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| TEXTILE - TEXTURIZING | 2.2 | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |

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HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 0.82 | LB/TON | 5.340 | 0.655 | 6.550 | 0.042S | 0.078C | E6 TONS | 867. | 364. | 971. |
| PET REF - MISC PT SOURCE | 0.85 | LB/TON | 0.586 | 0.293 | 0.586 | 0.031S | 0.042C | E6 TONS | 4937. | 1530. | 2527. |
| PETRLM STRG CRD OIL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.290 | 1.560 | 2.880 | 0.031S | 0.042C | E6 BBL | 589. | 183. | 300. |
| NEW= | 1.00 | | 1.560 | | | | | | | | |
| DEGREASING | 0.82 | LB/TON | 1.150 | 0.150 | 1.500 | 0.042S | 0.032C | E6 TONS | 1626. | 683. | 602. |
| PETR. - REFUELING | 0.85 | LB/BARREL | 0.504 | 0.076 | 0.504 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| INTERNAL COMBUSTION ENGS SPKIGN | 0.58 | LB/TON | 56.000 | 0.000 | 56.000 | 0.020S | 0.087S | E6 TONS | 28.7 | 5.7 | 25.0 |
| PETRLM STRG GASOLINE BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.490 | 0.290 | 2.850 | 0.031S | 0.035C | E6 BBL | 477. | 148. | 196. |
| NEW= | 1.00 | | 0.290 | | | | | | | | |
| CARBON BLACK - FURNACE PROCESS | 0.77 | LB/TON | 570.000 | 0.570 | 570.000 | 0.045S | 0.025C | E6 TONS | 2.0 | 0.89 | 0.56 |
| AMMONIA - REGENERATOR & CO ABSORBER | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| AMMONIA - METHANATOR PLANT | 0.83 | LB/TON | 90.000 | 0.450 | 90.000 | 0.045S | 0.090C | E6 TONS | 11.1 | 5.0 | 15.2 |
| PETR - SERVICE STATIONS | 0.85 | LB/BARREL | 0.229 | 0.034 | 0.378 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1195. |
| PETRLM STRG CRD OIL WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.031S | 0.042C | E6 BBL | 6000. | 1860. | 3054. |
| NEW= | 0.85 | | 0.048 | | | | | | | | |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 0.58 | LB/TON | 31.300 | 30.300 | 31.300 | 0.020S | 0.028S | E6 TONS | 18.0 | 3.6 | 5.0 |
| BRCHARD HEATERS | 1.00 | LB/TON | 9.200 | 0.000 | 9.200 | 0.033S | 0.028S | E6 TONS | 60.0 | 19.8 | 16.8 |
| ETHYLENE OXIDE - AIR OXIDATION | 0.87 | LB/TON | 392.000 | 3.920 | 392.000 | 0.045S | 0.075C | E6 TONS | 1.7 | 0.76 | 1.8 |
| DRY CLEANING | 1.00 | LB/TON | 258.000 | 9.000 | 258.000 | 0.050S | 0.018C | E6 TONS | 2.4 | 1.2 | 0.46 |
| PETRO. - TANKS - DO - BREATH | 1.00 | LB/BARREL | 0.431 | 0.286 | 0.593 | 0.031S | 0.032C | E6 BBL | 643. | 199. | 238. |
| COKE OVENS - BY PRODUCT | 0.93 | LB/TON | 5.900 | 0.060 | 5.900 | 0.028S | 0.010S | E6 TONS | 75.5 | 21.1 | 7.5 |
| PETRLM STRG JET FUEL BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.000 | 0.650 | 1.400 | 0.031S | 0.094C | E6 BBL | 124. | 38.4 | 181. |
| NEW= | 1.00 | | 0.650 | | | | | | | | |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VEGETABLE OIL PRODUCTION | 0.92 | LB/TON | 37.900 | 15.200 | 38.000 | 0.028S | 0.027S | E6 TONS | 6.5 | 1.8 | 1.8 |
| CORE OVENS | 0.93 | LB/TON | 10.500 | 1.050 | 10.500 | 0.028S | 0.035S | E6 TONS | 23.0 | 6.4 | 8.0 |
| BOILERS .3-10 MM BTU/HR | 0.25 | LB/E6 BTU | 0.042 | 0.000 | 0.042 | 0.037S | 0.043C | E12 BTU | 26471. | 9794. | 13857. |
| WOOD PULPING KRAFT PROCESS | 0.98 | LB/TON | 4.690 | 4.240 | 4.690 | 0.031S | 0.012C | E6 TONS | 34.0 | 10.5 | 4.3 |
| CHARCOAL | 0.85 | LB/TON | 438.000 | 4.400 | 438.000 | 0.045S | 0.043C | E6 TONS | 0.79 | 0.36 | 0.42 |
| BOILERS >250 MM BTU/HR | 0.58 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.050S | 0.055C | E12 BTU | 28011. | 14006. | 19836. |
| PETRLM STRG GASOLINE WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.031S | 0.035C | E6 BBL | 2950. | 915. | 1211. |
| NEW= | 0.85 | | 0.012 | | | | | | | | |
| PET REF - VACUUM DIST. | 0.85 | LB/TON | 0.130 | 0.000 | 0.130 | 0.031S | 0.042C | E6 TONS | 1846. | 572. | 945. |
| PETRLM STRG AV GS BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 2.060 | 1.350 | 2.850 | 0.031S | 0.094C | E6 BBL | 37.0 | 11.5 | 53.9 |
| NEW= | 1.00 | | 1.350 | | | | | | | | |
| BOILERS 10-250 MM BTU/HR | 0.32 | LB/E6 BTU | 0.045 | 0.000 | 0.045 | 0.050S | 0.014C | E12 BTU | 19534. | 9767. | 2914. |
| GRAPHIC ARTS-GRAVURE | 0.80 | LB/TON | 2300.000 | 2.300 | 2300.000 | 0.045S | 0.050C | E6 TONS | 0.12 | 0.053 | 0.074 |
| BOILERS <.3 MM BTU/HR | 0.30 | LB/E6 BTU | 0.019 | 0.000 | 0.019 | 0.020S | 0.029C | E12 BTU | 24572. | 4914. | 8131. |
| GRAPHIC ARTS FLEXOGRAPHY | 0.80 | LB/TON | 4800.000 | 48.000 | 4800.000 | 0.045S | 0.050C | E6 TONS | 0.051 | 0.023 | 0.032 |
| DIRECT FIRING OF MEAT | 0.62 | LB/TON | 6136.000 | 2636.000 | 6136.000 | 0.050S | 0.033S | E6 TONS | 0.034 | 0.017 | 0.011 |
| PETR. - TRANSFER - CRUDE | 0.85 | LB/BARREL | 0.071 | 0.048 | 0.084 | 0.029S | 0.042C | E6 BBL | 1440. | 418. | 737. |
| ASPHALT BATCHING | 0.47 | LB/TON | 0.167 | 0.000 | 0.167 | 0.008S | 0.050S | E6 TONS | 1480. | 118. | 740. |
| AUTOMOBILE ASSEMBLY | 0.91 | LB/PRD UNT | 12.600 | 0.420 | 21.000 | 0.040S | 0.029C | E6 PU | 10.6 | 4.2 | 3.5 |
| GRAPHIC ARTS - LETTERPRESS | 0.80 | LB/TON | 1500.000 | 15.000 | 1500.000 | 0.045S | 0.050C | E6 TONS | 0.11 | 0.049 | 0.069 |
| GRAPHIC ARTS - LITHOGRAPHY | 0.80 | LB/TON | 2500.000 | 28.000 | 2800.000 | 0.045S | 0.050C | E6 TONS | 0.063 | 0.028 | 0.040 |
| PETR. - TRANSFER - GAS | 0.85 | LB/BARREL | 0.071 | 0.012 | 0.116 | 0.042S | 0.035C | E6 BBL | 1560. | 651. | 632. |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | EMISSION RATES E N | EMISSION RATES UNCONT E U | GROWTH RATES DECIMAL/YR P B | GROWTH RATES DECIMAL/YR P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | INDUSTRY CAPACITY/PRODUCTION B 1985 | INDUSTRY CAPACITY/PRODUCTION C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GRAPHIC ARTS - METAL DECORATING | 0.80 | LB/TON | 3200.000 | 37.000 | 3700.000 | 0.045S | 0.050C | E6 TONS | 0.046 | 0.021 | 0.029 |
| PAINT | 0.85 | LB/TON | 30.000 | 0.300 | 30.000 | 0.067S | 0.026C | E6 TONS | 4.9 | 3.3 | 1.5 |
| BEER | 0.81 | LB/TON | 10.900 | 0.109 | 10.900 | 0.040S | 0.070C | E6 TONS | 7.2 | 2.9 | 7.0 |
| FORMALDEHYDE | 0.72 | LB/TON | 22.200 | 0.280 | 27.500 | 0.045S | 0.094C | E6 TONS | 4.2 | 1.9 | 6.1 |
| ACRYLONITRILE | 0.90 | LB/TON | 91.000 | 0.165 | 330.000 | 0.045S | 0.095C | E6 TONS | 0.83 | 0.37 | 1.2 |
| PETRLM STRG JET FUEL WRKING | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.031S | 0.094C | E6 BBL | 276. | 85.6 | 402. |
| NEW= | 0.85 | | 0.054 | | | | | | | | |
| MUNICIPAL INCINERATOR | 0.56 | LB/TON | 2.700 | 0.000 | 2.700 | 0.039S | 0.046S | E6 TONS | 32.5 | 12.7 | 14.9 |
| PETR. - TANKS - KER - BREATH | 1.00 | LB/BARREL | 0.435 | 0.295 | 0.593 | 0.031S | 0.000S | E6 BBL | 75.8 | 23.5 | 0.0 |
| PETRLM STRG SPC NAP BRTHNG | | | | | | | | | | | |
| EXIST= | 1.00 | LB/BARREL | 1.340 | 1.300 | 2.850 | 0.031S | 0.007C | E6 BBL | 18.2 | 5.6 | 1.3 |
| NEW= | 1.00 | | 1.300 | | | | | | | | |
| PHTHALIC ANHYDRIDE - O-XYLENE | 0.78 | LB/TON | 86.600 | 5.000 | 130.000 | 0.020S | 0.079C | E6 TONS | 0.42 | 0.084 | 0.48 |
| ETHYLENE DICHLORIDE | 0.62 | LB/TON | 19.600 | 0.140 | 140.000 | 0.045S | 0.090C | E6 TONS | 3.3 | 1.5 | 4.5 |
| INDUSTRIAL COMMERCIAL INCINERATORS | 0.38 | LB/TON | 2.880 | 0.000 | 2.880 | 0.039S | 0.110C | E6 TONS | 32.6 | 12.7 | 60.0 |
| POLYVINYL CHLORIDE | 0.82 | LB/TON | 9.600 | 0.085 | 17.000 | 0.000S | 0.078C | E6 TONS | 2.7 | 0.0055 | 3.1 |
| POLYETHYLENE - LOW DENSITY | 0.88 | LB/TON | 4.200 | 0.250 | 25.000 | 0.006S | 0.165C | E6 TONS | 4.8 | 0.29 | 17.5 |
| PETR. - TRANSFER - JETFUEL | 0.85 | LB/BARREL | 0.090 | 0.054 | 0.116 | 0.042S | 0.094C | E6 BBL | 146. | 60.9 | 213. |
| MALEIC ANHYDRIDE BENZENE OXID. | 1.00 | LB/TON | 147.000 | 0.172 | 172.000 | 0.045S | 0.090C | E6 TONS | 0.23 | 0.10 | 0.31 |
| POLYETHYLENE - HIGH DENSITY | 1.00 | LB/TON | 7.400 | 0.500 | 50.000 | 0.000S | 0.176C | E6 TONS | 1.9 | 0.0 | 7.6 |
| SYNTHETIC RESINS ACRYLIC | 0.87 | LB/TON | 36.000 | 2.400 | 240.000 | 0.045S | 0.154C | E6 TONS | 0.58 | 0.26 | 1.9 |
| PRINTING INK | 0.83 | LB/TON | 48.000 | 12.000 | 120.000 | 0.045S | 0.050C | E6 TONS | 0.43 | 0.19 | 0.27 |
| VARNISH | 0.85 | LB/TON | 34.900 | 0.679 | 67.900 | 0.067S | 0.026C | E6 TONS | 1.3 | 0.86 | 0.38 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MINERAL WOOL | | | | | | | | | | | |
| | 0.82 | LB/TON | 2.020 | 0.870 | 2.020 | 0.029S | 0.020S | E6 TONS | 8.4 | 2.5 | 1.7 |
| DEEP FAT FRYING | | | | | | | | | | | |
| | 0.81 | LB/TON | 6.240 | 0.078 | 7.750 | 0.028S | 0.043C | E6 TONS | 2.6 | 0.74 | 1.4 |
| PETRLM STRG AV GS WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.031S | 0.094C | E6 BBL | 67.0 | 20.8 | 97.5 |
| NEW= | 0.85 | | 0.055 | | | | | | | | |
| STYRENE - BUTADIENE RUBBER | | | | | | | | | | | |
| | 0.75 | LB/TON | 4.200 | 3.100 | 4.200 | 0.003S | 0.020C | E6 TONS | 2.3 | 0.070 | 0.51 |
| POLYSTYRENE | | | | | | | | | | | |
| | 0.88 | LB/TON | 4.200 | 0.120 | 11.700 | 0.005S | 0.075C | E6 TONS | 2.3 | 0.12 | 2.5 |
| PLYWOOD-VENEER | | | | | | | | | | | |
| | 0.95 | LB/TON | 0.001 | 0.000 | 0.001 | 0.050S | 0.025C | E6 TONS | 22600. | 11300. | 6330. |
| SYNTHETIC FIBERS NYLON | | | | | | | | | | | |
| | 0.72 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.127C | E6 TONS | 1.7 | 0.76 | 3.9 |
| SYNTHETIC RESINS PHENOLIC | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.070C | E6 TONS | 1.1 | 0.055 | 1.1 |
| PETR. - TRANSFER - AVGAS | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.055 | 0.116 | 0.042S | 0.094C | E6 BBL | 35.6 | 14.8 | 51.8 |
| PETRLM REFNRY PRS GAS CO | | | | | | | | | | | |
| | 0.85 | LB/E6 BTU | 33.000 | 0.000 | 33.000 | 0.031S | 0.042C | E12 BTU | 0.23 | 0.070 | 0.12 |
| ASPHALT BLOWING | | | | | | | | | | | |
| | 0.90 | LB/TON | 2.500 | 0.025 | 2.500 | 0.042S | 0.025S | E6 TONS | 3.1 | 1.3 | 0.79 |
| SYNTHETIC RESINS UREA-MELANINE | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.073C | E6 TONS | 0.74 | 0.037 | 0.76 |
| TEXTILE - HEAT SETTING | | | | | | | | | | | |
| | 0.86 | LB/TON | 3.054 | 1.486 | 10.180 | 0.042S | 0.081C | E6 TONS | 0.79 | 0.33 | 0.93 |
| WHISKEY | | | | | | | | | | | |
| | 0.95 | LB/PRD UNT | 2.760 | 0.055 | 2.760 | 0.032S | 0.060S | E6 PU | 1.3 | 0.42 | 0.78 |
| PETRLM STRG SPC NAP WRKNG | | | | | | | | | | | |
| EXIST= | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.031S | 0.007C | E6 BBL | 33.0 | 10.2 | 2.4 |
| NEW= | 0.85 | | 0.056 | | | | | | | | |
| SYNTHETIC RESINS ABS-SAN | | | | | | | | | | | |
| | 0.80 | LB/TON | 5.760 | 0.075 | 7.500 | 0.005S | 0.072C | E6 TONS | 0.47 | 0.023 | 0.47 |
| SYNTHETIC FIBERS ACETATE | | | | | | | | | | | |
| | 0.93 | LB/TON | 7.000 | 0.350 | 7.000 | 0.045S | 0.028C | E6 TONS | 0.43 | 0.19 | 0.14 |
| BRICK & RELATED CLAY PRODUCTS | | | | | | | | | | | |
| | 0.80 | LB/TON | 0.073 | 0.000 | 0.073 | 0.033S | 0.027S | E6 TONS | 35.7 | 11.8 | 9.6 |
| PETR. - TRANSFER - SP. NAP. | | | | | | | | | | | |
| | 0.85 | LB/BARREL | 0.090 | 0.056 | 0.116 | 0.042S | 0.007C | E6 BBL | 17.7 | 7.4 | 1.3 |
| FIBERGLASS MANUF - WOOL | | | | | | | | | | | |
| | 0.70 | LB/TON | 3.390 | 0.102 | 3.390 | 0.063S | 0.042C | E6 TONS | 1.1 | 0.68 | 0.55 |

HYDROCARBONS

SUMMARY OF INPUT/OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | K | EMISSION UNITS | EMISSION RATES ALLOWABLE E S | E N | UNCONT E U | GROWTH RATES DECIMAL/YR P B | P C | UNITS/YR | INDUSTRY CAPACITY/PRODUCTION A 1975 | B 1985 | C 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COFFEE ROASTING | 0.85 | LB/TON | 1.100 | 0.005 | 1.100 | 0.040S | 0.000S | E6 TONS | 1.5 | 0.62 | 0.0 |
| SMOKED MEAT | 0.81 | LB/TON | 0.350 | 0.150 | 0.350 | 0.040S | 0.017C | E6 TONS | 3.6 | 1.4 | 0.66 |
| TEXTILE - CARPET MFG | 0.86 | LB/TON | 0.720 | 0.040 | 0.800 | 0.042S | 0.053C | E6 TONS | 1.8 | 0.76 | 1.2 |
| POLYPROPYLENE | 0.78 | LB/TON | 0.590 | 0.003 | 0.700 | 0.003S | 0.150C | E6 TONS | 1.6 | 0.048 | 4.9 |
| AUTOBODY INCINERATORS | 0.90 | LB/PRD UNT | 1.000 | 0.460 | 1.000 | 0.039S | 0.280S | E6 PU | 0.29 | 0.11 | 0.82 |
| TEXTILE - TEXTURIZING | 0.86 | LB/TON | 0.920 | 0.230 | 4.600 | 0.042S | 0.023C | E6 TONS | 0.87 | 0.36 | 0.22 |
| SYNTHETIC RESINS ALKYD | 0.68 | LB/TON | 1.710 | 0.017 | 1.710 | 0.045S | 0.015C | E6 TONS | 0.53 | 0.24 | 0.085 |
| SEC ZINC SWEAT | 0.82 | LB/TON | 2.810 | 0.003 | 2.810 | 0.035S | 0.039C | E6 TONS | 0.20 | 0.069 | 0.091 |
| LEAD ACID BATTERY PLANTS | 0.76 | LB/PRD UNT | 0.007 | 0.000 | 0.009 | 0.040S | 0.050C | E6 PU | 80.0 | 32.0 | 50.3 |
| PATHOLOGICAL INCINERATOR | 0.34 | LB/TON | 3.800 | 0.040 | 3.800 | 0.039S | 0.026C | E6 TONS | 0.13 | 0.051 | 0.038 |
| SEC MAGNESIUM | 0.82 | LB/TON | 3.390 | 0.003 | 3.390 | 0.035S | 0.016C | E6 TONS | 0.017 | 0.0061 | 0.0030 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| INDUSTRIAL SURFACE COATING | 4937. | 1899. | 1101. | 1351. | 4025. | 1460. | 2560000. | 0.877 |
| PET REF - MISC PT SOURCE | 1859. | 1230. | 848. | 848. | 1859. | 1354. | 505000. | 0.500 |
| PETRLM STRG CRD OIL BRTHNG | 1280. | 674. | 465. | 585. | 842. | 842. | 0.0 | -0.000 |
| DEGREASING | 1370. | 767. | 445. | 580. | 1051. | 524. | 526000. | 0.870 |
| PETR. - REFUELING | 888. | 632. | 436. | 436. | 886. | 504. | 383000. | 0.849 |
| * INTERNAL COMBUSTION ENGS SPKIGN | 873. | 467. | 373. | 373. | 873. | 373. | 499000. | 1.000 |
| PETRLM STRG GASOLINE BRTHNG | 959. | 355. | 245. | 469. | 295. | 295. | 0.0 | 0.000 |
| CARBON BLACK - FURNACE PROCESS | 558. | 436. | 240. | 240. | 558. | 240. | 318000. | 0.999 |
| AMMONIA - REGENERATOR & CO ABSORBER | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| AMMONIA - METHANATOR PLANT | 981. | 415. | 228. | 228. | 981. | 232. | 749000. | 0.995 |
| PETR - SERVICE STATIONS | 666. | 287. | 198. | 327. | 403. | 229. | 174000. | 0.852 |
| PETRLM STRG CRD OIL WRKNG | 323. | 181. | 125. | 148. | 225. | 225. | 0.0 | 0.000 |
| INTERNAL COMB ENGS DIESEL DUALFUEL | 209. | 163. | 130. | 130. | 209. | 206. | 2500. | 0.032 |
| * ORCHARD HEATERS | 353. | 276. | 185. | 185. | 353. | 185. | 168000. | 1.000 |
| ETHYLENE OXIDE - AIR OXIDATION | 597. | 290. | 159. | 159. | 597. | 164. | 433000. | 0.990 |
| DRY CLEANING | 364. | 304. | 152. | 152. | 364. | 160. | 204000. | 0.965 |
| PETRO. - TANKS - DO - BREATH | 261. | 139. | 95.6 | 132. | 190. | 158. | 31700. | 0.336 |
| COKE OVENS - BY PRODUCT | 228. | 207. | 149. | 149. | 228. | 150. | 77900. | 0.990 |
| PETRLM STRG JET FUEL BRTHNG | 213. | 62.0 | 42.8 | 59.9 | 114. | 114. | 0.0 | 0.000 |
| VEGETABLE OIL PRODUCTION | 145. | 114. | 81.8 | 82.1 | 144. | 107. | 37400. | 0.599 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| CORE OVENS | 152. | 112. | 80.9 | 80.9 | 152. | 87.9 | 63600. | 0.900 |
| • BOILERS .3-10 MM BTU/HR | 212. | 139. | 87.6 | 87.6 | 212. | 87.6 | 124000. | 1.000 |
| WOOD PULPING KRAFT PROCESS | 88.0 | 78.1 | 53.9 | 53.9 | 88.0 | 84.8 | 3200. | 0.096 |
| CHARCOAL | 225. | 148. | 81.4 | 81.4 | 225. | 82.8 | 142000. | 0.990 |
| • BOILERS >250 MM BTU/HR | 264. | 154. | 77.2 | 77.2 | 264. | 77.2 | 186000. | 1.000 |
| PETRLM STRG GASOLINE WRKNG | 205. | 89.0 | 61.4 | 100. | 72.3 | 72.3 | 0.0 | 0.000 |
| PET REF - VACUUM DIST. | 154. | 102. | 70.4 | 70.4 | 154. | 70.4 | 83700. | 0.999 |
| PETRLM STRG AV GS BRTHNG | 129. | 38.1 | 26.3 | 36.4 | 70.4 | 70.4 | 0.0 | -0.000 |
| • BOILERS 10-250 MM BTU/HR | 162. | 141. | 70.3 | 70.3 | 162. | 70.3 | 91200. | 1.000 |
| GRAPHIC ARTS-GRAVURE | 175. | 108. | 59.2 | 59.2 | 175. | 59.3 | 116000. | 0.999 |
| • BOILERS <.3 MM BTU/HR | 93.2 | 70.0 | 56.0 | 56.0 | 93.2 | 56.0 | 37100. | 1.000 |
| GRAPHIC ARTS FLEXOGRAPHY | 159. | 97.9 | 53.9 | 53.9 | 159. | 54.9 | 104000. | 0.990 |
| DIRECT FIRING OF MEAT | 85.3 | 64.1 | 32.1 | 32.1 | 85.3 | 54.9 | 30300. | 0.570 |
| PETR. - TRANSFER - CRUDE | 77.7 | 43.5 | 30.9 | 36.5 | 65.7 | 54.4 | 11200. | 0.324 |
| • ASPHALT BATCHING | 87.1 | 58.1 | 53.4 | 53.4 | 87.1 | 53.4 | 33600. | 1.000 |
| AUTOMOBILE ASSEMBLY | 135. | 60.8 | 36.5 | 60.8 | 80.9 | 37.9 | 42900. | 0.967 |
| GRAPHIC ARTS - LETTERPRESS | 108. | 66.0 | 36.3 | 36.3 | 108. | 37.0 | 70400. | 0.990 |
| GRAPHIC ARTS - LITHOGRAPHY | 115. | 63.0 | 34.6 | 38.8 | 103. | 35.4 | 67200. | 0.989 |
| PETR. - TRANSFER - GAS | 108. | 47.1 | 27.4 | 44.8 | 66.1 | 33.8 | 32300. | 0.837 |
| GRAPHIC ARTS - METAL DECORATING | 111. | 58.9 | 32.4 | 37.4 | 95.9 | 33.1 | 62700. | 0.988 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1985 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| PAINT | 81.5 | 62.9 | 20.9 | 20.9 | 81.5 | 21.5 | 59900. | 0.990 |
| BEER | 62.5 | 31.8 | 19.1 | 19.1 | 62.5 | 19.5 | 43000. | 0.990 |
| FORMALDEHYDE | 102. | 33.6 | 18.5 | 22.9 | 82.6 | 19.3 | 63300. | 0.987 |
| ACRYLONITRILE | 305. | 34.0 | 18.7 | 67.8 | 84.2 | 18.8 | 65400. | 0.998 |
| PETRLM STRG JET FUEL WRKING | 33.4 | 10.6 | 7.3 | 9.4 | 18.5 | 18.5 | 0.0 | 0.000 |
| * MUNICIPAL INCINERATOR | 35.9 | 24.6 | 15.0 | 15.0 | 35.9 | 15.0 | 20800. | 1.000 |
| PETR. - TANKS - KER - BREATH | 22.5 | 16.5 | 11.4 | 15.5 | 16.5 | 14.8 | 1600. | 0.322 |
| PETRLM STRG SPC NAP BRTHNG | 27.8 | 12.2 | 8.4 | 17.9 | 12.9 | 12.9 | 0.0 | -0.000 |
| PHTHALIC ANHYDRIDE - O-XYLENE | 45.4 | 14.2 | 11.3 | 17.0 | 30.3 | 12.4 | 17800. | 0.942 |
| ETHYLENE DICHLORIDE | 339. | 20.1 | 11.0 | 78.8 | 47.5 | 11.3 | 36100. | 0.993 |
| * INDUSTRIAL COMMERCIAL INCINERATORS | 50.7 | 17.8 | 10.9 | 10.9 | 50.7 | 10.9 | 39700. | 1.000 |
| POLYVINYL CHLORIDE | 40.5 | 10.8 | 10.8 | 19.1 | 22.9 | 10.9 | 11900. | 0.991 |
| POLYETHYLENE - LOW DENSITY | 246. | 9.0 | 8.4 | 50.1 | 41.3 | 10.4 | 30800. | 0.940 |
| PETR. - TRANSFER - JETFUEL | 17.7 | 5.6 | 3.3 | 4.2 | 13.7 | 9.5 | 4100. | 0.400 |
| MALEIC ANHYDRIDE BENZENE OXID. | 46.8 | 16.9 | 9.3 | 10.9 | 40.0 | 9.3 | 30600. | 0.999 |
| POLYETHYLENE - HIGH DENSITY | 238. | 7.0 | 7.0 | 47.0 | 35.2 | 8.9 | 26300. | 0.932 |
| SYNTHETIC RESINS ACRYLIC | 255. | 9.1 | 5.0 | 33.5 | 38.2 | 7.2 | 31000. | 0.933 |
| PRINTING INK | 34.6 | 8.5 | 4.7 | 11.7 | 13.9 | 7.0 | 6800. | 0.750 |
| VARNISH | 48.4 | 19.2 | 6.4 | 12.4 | 24.9 | 6.7 | 18100. | 0.981 |
| MINERAL WOOL | 8.4 | 7.0 | 4.9 | 4.9 | 8.4 | 6.4 | 1900. | 0.569 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | TONS/YEAR T -T S N 1935 | 1 - E /E N S |
|---|---|---|---|---|---|---|---|---|
| DEEP FAT FRYING | 12.6 | 6.7 | 4.8 | 6.0 | 10.2 | 4.9 | 5200. | 0.988 |
| PETRLM STRG AV GS WRKNG | 8.1 | 2.6 | 1.8 | 2.3 | 4.5 | 4.5 | 0.0 | 0.000 |
| STYRENE - BUTADIENE RUBBER | 4.5 | 3.7 | 3.6 | 3.6 | 4.5 | 4.3 | 240. | 0.262 |
| POLYSTYRENE | 24.9 | 4.3 | 4.1 | 11.5 | 9.0 | 4.3 | 4600. | 0.971 |
| PLYWOOD-VENEER. | 10.3 | 8.1 | 4.0 | 4.0 | 10.3 | 4.1 | 6200. | 0.990 |
| SYNTHETIC FIBERS NYLON | 14.2 | 4.3 | 2.4 | 2.4 | 14.2 | 2.9 | 11200. | 0.950 |
| SYNTHETIC RESINS PHENOLIC | 6.5 | 2.5 | 2.4 | 3.1 | 5.0 | 2.4 | 2500. | 0.987 |
| PETR. - TRANSFER - AVGAS | 4.3 | 1.4 | 0.79 | 1.0 | 3.3 | 2.4 | 990. | 0.389 |
| PETRLM REFNRY PRS GAS CO | 4.8 | 3.2 | 2.2 | 2.2 | 4.8 | 2.2 | 2600. | 1.000 |
| ASPHALT BLOWING | 4.4 | 3.5 | 2.1 | 2.1 | 4.4 | 2.1 | 2300. | 0.990 |
| SYNTHETIC RESINS UREA-MELANINE | 4.5 | 1.7 | 1.6 | 2.1 | 3.4 | 1.6 | 1800. | 0.987 |
| TEXTILE - HEAT SETTING | 7.6 | 1.0 | 0.61 | 2.0 | 2.3 | 1.4 | 850. | 0.513 |
| WHISKEY | 2.7 | 1.7 | 1.2 | 1.2 | 2.7 | 1.2 | 1500. | 0.980 |
| PETRLM STRG SPC NAP WRKNG | 1.7 | 1.3 | 0.87 | 1.1 | 1.2 | 1.2 | 0.0 | 0.000 |
| SYNTHETIC RESINS ABS-SAN | 2.8 | 1.1 | 1.0 | 1.3 | 2.2 | 1.0 | 1100. | 0.987 |
| SYNTHETIC FIBERS ACETATE | 1.8 | 1.4 | 0.77 | 0.77 | 1.8 | 0.82 | 1000. | 0.950 |
| • BRICK & RELATED CLAY PRODUCTS | 1.3 | 1.0 | 0.69 | 0.69 | 1.3 | 0.69 | 620. | 1.000 |
| PETR. - TRANSFER - SP. NAP. | 0.94 | 0.68 | 0.39 | 0.51 | 0.73 | 0.60 | 120. | 0.378 |
| FIBERGLASS MANUF - WOOL | 1.9 | 1.3 | 0.48 | 0.48 | 1.9 | 0.53 | 1400. | 0.970 |
| COFFEE ROASTING | 0.72 | 0.72 | 0.43 | 0.43 | 0.72 | 0.44 | 280. | 0.995 |

HYDROCARBONS

SUMMARY OF OUTPUT VARIABLES
FOR MODEL IV

| SOURCE | EMISSIONS 1000 TONS/YEAR | | | | | | TONS/YEAR | |
|---|---|---|---|---|---|---|---|---|
| | T U 1985 | T A 1975 | T E 1985 | T UE 1985 | T S 1985 | T N 1985 | T -T S N 1985 | 1 - E /E N S |
| SMOKED MEAT | 0.60 | 0.51 | 0.31 | 0.31 | 0.60 | 0.43 | 170. | 0.571 |
| TEXTILE - CARPET MFG | 1.1 | 0.57 | 0.33 | 0.37 | 0.95 | 0.37 | 580. | 0.944 |
| POLYPROPYLENE | 1.8 | 0.37 | 0.36 | 0.42 | 1.5 | 0.36 | 1100. | 0.994 |
| AUTOBODY INCINERATORS | 0.50 | 0.13 | 0.080 | 0.080 | 0.50 | 0.27 | 220. | 0.540 |
| TEXTILE - TEXTURIZING | 2.[illegible] | 0.34 | 0.20 | 1.00 | 0.43 | 0.26 | 170. | 0.750 |
| SYNTHETIC RESINS ALKYD | 0.36 | 0.31 | 0.17 | 0.17 | 0.36 | 0.17 | 180. | 0.990 |
| SEC ZINC SWEAT | 0.33 | 0.23 | 0.15 | 0.15 | 0.33 | 0.15 | 180. | 0.999 |
| LEAD ACID BATTERY PLANTS | 0.45 | 0.21 | 0.12 | 0.16 | 0.34 | 0.13 | 200. | 0.985 |
| PATHOLOGICAL INCINERATOR | 0.11 | 0.084 | 0.051 | 0.051 | 0.11 | 0.052 | 50.0 | 0.989 |
| SEC MAGNESIUM | 0.029 | 0.024 | 0.016 | 0.016 | 0.029 | 0.016 | 10.0 | 0.999 |